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Ninepenny " "	4/6 "	4/1 "	Ninepenny " "	4/6 "	4/1 "
Shilling	6/0 "	5/5 "	Shilling " "	6/0 "	5/ "
<b>ECTURES.</b> —Sixpenny Bottles ...	3/0 "	2/9 "	<b>PREPARATIONS.</b> —Sixpenny Bottles	4/0 "	3/7 "
Ninepenny " "	4/6 "	4/1 "	Ninepenny " "	4/6 "	4/1 "
Shilling	6/0 "	5/5 "	Shilling " "	6/0 "	5/5 "

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Reference is asked to notice of judgment obtained by this Company against infringers of their Trade Word, "Vaseline," published in THE CHEMIST AND DRUGGIST of December 15, 1884, and previously.

Also to the Circular in January issue (facing page 164), which gives the exact style of the genuine packages of the Medicinal, Toilet, and Household Preparations.

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# NOTICE.



## NEPENTHE.

### FERRIS & Co., v. GOODMAN.

**NOTICE IS HEREBY GIVEN** that by an Order of the Chancery Division of the High Court of Justice, made the 18th day of July, 1884, in the above action, **IT WAS ORDERED** that the Defendant and others be perpetually restrained from selling, or offering for sale, any formula or recipe for "**Nepenthe**," and from otherwise prejudicing the sale thereof by, or injuring the title thereto, or Trade Mark therein, of the Plaintiffs, **Messrs. Ferris & Co., of Bristol**, the **registered proprietors thereof**.

And it was further ordered that the Defendant do pay the costs of the said Action.

Dated this 12th day of August, 1884.

(Signed) **CHILTON & GREEN-ARMYTAGE, BRISTOL,**  
*Solicitors for the said Plaintiffs.*

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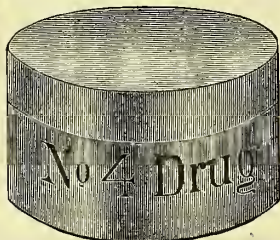
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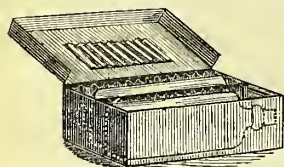
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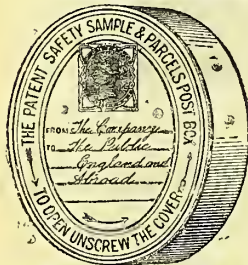
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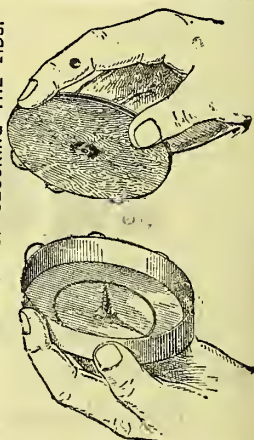
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„ F. PADLEY	...	...	...	...	St. Albans.
„ E. WELLS SMITH	...	...	...	...	Sheffield.

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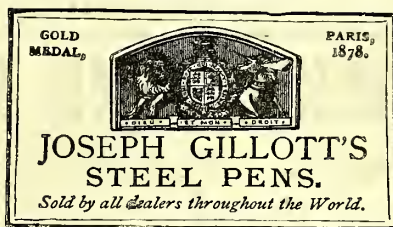
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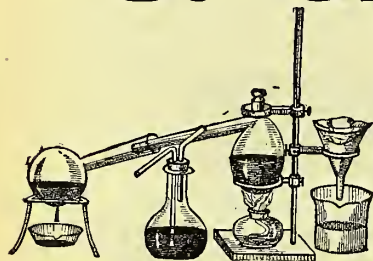
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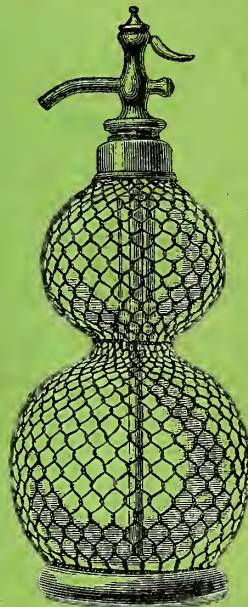
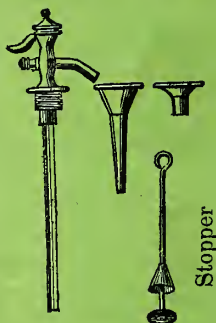
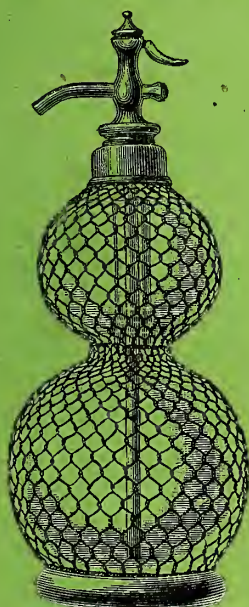


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SET WITH FINE STEEL WIRES AND ENCLOSED WITH BRISTLES. These brushes are delightfully cool to the head, producing a most agreeable sensation, and will penetrate the most luxuriant hair without injury. They are altogether machine-made; the black handles are covered with a coating of Japan burnt on and then polished. These handles are also in solid pieces, and hence will not fall apart as in the case of brush handles covered with veneer. The latter brush shows a most remarkable development in metallic brush making. It is made of fine hard drawn steel wires, about the thickness of ordinary bristles. This penetrates, smooths, and fixes the hair. It is, to express the words of a user, "Simply perfection as a hair brush, and must, when known, take the place of the bristle brush for toilet uses." Send for a SAMPLE BY POST AND TRY IT.

## Prices of Metallic Comb-Brush, post free.

Ladies' and Gentlemen's Black Japan.....	1/6, 1/9, 2/0
" " Lionite-figured.....	1/9, 2/0, 2/3
" " Ivory-coated.....	1/6, 2/0
Gentlemen's Black Japan, Military Style.....	2/0, 2/6, 3/0

## New Patent Fine Steel Comb-brush with or without bristles, post free.

Ladies' and Gentlemen's Black Japan.....	1/9, 2/0, 2/3
" " Ivory-coated.....	2/0, 2/3, 2/6
Gentlemen's Black Japan, Military Style in fine steel only, without bristles.....	2/3, 2/6

These brushes are now enclosed with bristles in order to give them a more finished appearance. They can, however, be had without the bristles, but all orders for the former must quote the letter "B" following the number of brush required, as "Fine Steel Black Japan No. 8 B," or "No. 9 B," &c.

All Goods are forwarded safely packed in Neat Boxes.

ASHWORTH BROS. MOSS BROOK WORKS,  
COLLYHURST MANCHESTER, ENGLAND.

## SOAP AND OTHER BOXES,

Also Soft Wood Staves and Cask Heads,

## FOR THE TRADE.

Imported from Norway, ready for nailing together, by

BANKS & RATCLIFFE, G16 Exchange Buildings, Liverpool.

PRICES ON APPLICATION.

## A PERFECT BOON TO MOTHERS!

## ROGERS' "NURSERY"

## HAIR LOTION.

One application is guaranteed to destroy all Nits and Parasites in Children's Heads, and immediately allay the Itching and Irritation.

It is now used in Thousands of Families with the greatest success, and all who have tried it are delighted with the effect, and declare it to be worth A GUINEA A BOTTLE.

PREPARED ONLY BY

WILLIAM ROGERS,  
CHEMIST,

BEN JONSON ROAD, STEPNEY, E.  
Sold in large Bottles, price ONE SHILLING. Sample Bottle, 7d.

SOLD BY ALL CHEMISTS AND PERFUMERS.

Observe! Genuine only in Yellow Wrapper, White Label.  
WHOLESALE AGENTS.—Barclay & Son; Edwards & Son; Maw, Son & Thompson; Millard & Son; Sanger & Sons; Thompson & Co., Limited; Butler & Crispe; Hovenden & Sons; Newbery & Sons.

## Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

## O'KELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/9, and 3/6; Wholesale, 7/, 12/, and 22/6 per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNEE, THOMAS WEST, Chemist, 61 Chester Road, Stretford, Lancashire.

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HAS RECEIVED THE HIGHEST AWARDS AT ALL THE GREAT EXHIBITIONS.

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JAMES'S HERBAL OINTMENT, for the Cure of Pimples, Black Specks, Blotches, &c., and taking away Tan Freckles, Sunburn, &c. Sold by all Chemists, 1/1½ and 2/9 per box.

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For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- and 2/- per box.

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For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.

JAMES & CO., 268 (late 226) Caledonian Rd., London, N.

## CHUBB'S Best SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d., and in hinged boxes, 8s. 6d., per dozen.

## CHUBB'S Extra Scented VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. gross, and 2d. Boxes, 11s. gross, and in ¼-lb. and ½-lb. Packets, 10d. per lb.

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In 1d. Boxes, 5s. gross, and 2d. Boxes, 9s. gross, and in 3d. and 6d. ROUND Boxes, 1s. 6d. and 2s. 6d. dozen.

SUBJECT TO 15 PER CENT. DISCOUNT FOR CASH

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SPECIAL QUOTATIONS FOR LARGE QUANTITIES.



# THE CROWN PERFUMERY CO.,



177 New Bond St., London,

Be to draw the attention of Chemists, Druggists, and Perfumery Dealers to their Fine Perfumes and Fancy Soaps, for the excellent quality of which

**SEVEN PRIZE MEDALS HAVE BEEN AWARDED.**

*Concentrated Essences of Great Fragrance and Strength:—*

Tanglewood,  
Crown Bouquet,  
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White Rose,  
Jockey Club,  
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Opoponax,  
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Isle of Wight Bouquet,

16/, 20/, 28/, 48/, and 84/ per doz.

SUPPLIED IN BOND FOR EXPORT AT GREATLY REDUCED PRICES.

**THE CROWN SOAPS** are prepared with great care from the purest materials, delicately perfumed, and very lasting.

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**PURE COAL TAR SOAP.**—Each tablet enveloped in tin-foil. 27s. per gross. The well-known disinfecting properties of this Soap have caused it to be in universal demand. Its regular use, especially in warm climates, quickly allays all irritation of the Skin, whilst its agreeable odour induces a feeling of freshness and comfort not attainable by any other means.

**OPALINE SOAP, FOR THE SKIN AND COMPLEXION.**—Absolutely pure, delicately scented, and very emollient. 12/ per dozen boxes.

**OPALINE TOOTH PASTE, the New Fragrant Dentifrice,** 8/ per doz.

**OPALINE FACE POWDER,** 3/6 and 7/ per dozen packets; 15/ per dozen boxes.

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ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE MANUFACTORY,

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**GOLD AND SILVER MEDALS, HEALTH EXHIBITION, 1884.**

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Price, 1/, 2/6, and 5/.

*N.B.*—500 detailed prospectuses, containing certificates and testimonials, sent with name and address to every purchaser of 3 dozen Aromatic Ozonizers, 1s. size.

SOLD BY ALL CHEMISTS AND DRUGGISTS. THE USUAL ALLOWANCE TO THE TRADE.

**EUGENE RIMMEL, PERFUMER TO H.R.H. THE PRINCESS OF WALES, 96 STRAND, LONDON.**

**USE ELECTRIC  
OXYOZO,  
POWERFUL DISINFECTANT,**

Instantaneous and Perfectly Inodorous.

6 oz., 6d.; 4s. 3d. per dozen.

13½ oz., 1s.; 8s. „

**H. CHURCHILL, MANUFACTURER,**

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**BRECKNELL'S  
SKIN SOAP,**

A PURE AND UNSCENTED SOAP,  
RECOMMENDED BY EMINENT MEDICAL MEN.

*In the original Shilling Packets, 8/- per doz.*

5 per cent. discount for Cash. 10 per cent. on a gross.

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HANDBILLS AND SHOWCARDS ON APPLICATION.



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**ELECTRIC OIL**, for the Hair. 2s. 6d., 20s. doz ; 3s. 6d. 27s. doz.  
**TROTTER OIL**. 2-oz., 4s.; 3-oz., 6s.; 4-oz., 8s.; 6-oz., 12s. doz.  
**DEPILATORY POWDER**. 3s. 6d., 27s. doz.

**WATERS OF EBLANA**. 1s., 8s.; 2s., 16s. doz.  
**HAIR COLOUR RESTORER** (Registered), free from Sediment.  
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5 per cent. cash with order. Trade only supplied. Goods specially made to suit all climates.

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 SPECIAL TERMS TO SHIPPERS.

## HAMAMELIS

BY HER MAJESTY'S  
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 PATENT, 1884.

## TOILET SOAP.

The finest Toilet Soap in the World. See *The Lancet*, *British Medical Journal*, *U.S. Dispensatory*, and other medical evidence, on the value of Hamamelis for the skin.

Dr. THOMAS SIMPSON, Glasgow, writes:—"I have used the soap you sent me and can give it unqualified praise. Hamamelis Virginia has been used in Homœopathic practice for twenty years, so that it is not an untried remedy, having proved of incalculable value in many disorders of the skin, especially in varicose states, &c., &c., and you have met a long-felt want in bringing it more prominently into public notice."

Dr. PROCTER writes:—"Owing to the chemical qualities of Hamamelis, this soap is manufactured with less Alkali than any other of similar quality, and is, therefore, the most valuable soap for the nursery. It possesses the most marked cooling and astringent properties, and thus softens and beautifies the complexion by acting on the pores of the skin, preventing the occurrence of redness or blotches and the formation of pimples, by freeing the sweat glands."

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"There is no more delightful toilet soap in existence, and Hamamelis only needs to be used once to find a permanent home in every house."—*Court Circular*.

"The Hamamelis Toilet Soap has, in addition to its invaluable healing qualities, a delicious fragrance quite unique, and when once used will be found absolutely indispensable to the toilet."—*Court Journal*.

Price—Plain, 1s. 6d. per Box of 3 Tablets; Highly Perfumed and Wrapped, 2s. 6d. per Box.

See "INVENTIONS," STAND 272a, SOUTH CENTRAL.

Sole Proprietors and Makers—

*Jas. Alexander & Co.,*

Pure Toilet Soap Works, Lambeth S.E.

ESTABLISHED 60 YEARS.

Exhibitions—1861, 1862; Paris, 1867, 1878.

## LEATHART'S EXHIBITION HAIR DYES

To Retail at 1/-, 2/6, 3/6 and 5/6. See Price List.

To Dye instantaneous, Black, Dark Brown, Ordinary Brown, Light Brown, and Special Brown.

## LEATHART'S COLORIFIC.

A Stain in one preparation; perfect, light, and ordinary browns.  
 To Retail at 3/6; 24/- per dozen.

## EXHIBITION DYE IN BULK.

2/6, 5/-, 10/-, £1. Five Colours.

ONE PREPARATION IN BULK.

## MALACCA JUICE.

Winchester (4 pints), 14/. Sample Bottle, carriage free, 1/6.

AN ORIGINAL PREPARATION. QUICK IN ACTION.

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N.B.—Price List will be forwarded.

## BATH GLOVES, ENEMAS, ETC.

LATEST REDUCED PRICES.

Post free to Chemists only on receipt of Trade Card.

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# GENUINE OIL OF MUSTARD SEED

Is strongly recommended as a safe and effectual remedy in cases of Rheumatism, Gout, Rheumatic Gout, Sciatica, Lumbago, Headache, Pains in the Stomach, Spasms, Bruises, Chilblains, &c. Retail in Bottles, 1s. each.

Imported by J. H. & S. JOHNSON, Wholesale Druggists,  
 6, 8, & 10 WHITECHAPEL, and 7 CHURCH STREET LIVERPOOL.

## EIGHT PRIZE MEDALS.

# GUSTAV BOEHM'S

**TRANSPARENT GLYCERINE SOAP**, Manufactured with Pure Spirits of Wine and Purest Glycerine. The first Soap of this description introduced in this market, and still recognised the best. Prices have been reduced lately.

**PURIFIED TOILET SOAPS**, Highly Scented. Large variety of such delicate Scents as Ess. Bouquet, Jockey Club, Musk, Oppopanax, Rose de Mai, New Mown Hay, Violet, Lavender, Tea Rose, Mignonette, and many other distinct Perfumes.

**CALCUTTA GOLD MEDAL EXHIBITION SOAP**, assorted in 12 different scents and colours.

**WINDSOR, HONEY, OATMEAL, COAL TAR, CARBOLIC**, and all kinds of ordinary Toilet Soaps.

**EXTRACTS OF FLOWERS**, Triple, Double, and Simple.

**FLORAL PERFUMES**, with appropriate Silk Flower Labels—very attractive.

**LAVENDER WATER, FLORIDA WATER, EAU DE COLOGNE**, and all other Toilet Waters.

**DENTIFRICE, VIOLET POWDER**, and all other Requisites for the Toilet.

**PETROSINE POMADE and PETROSINE IN BULK**—a Petroleum Jelly, guaranteed never to turn rancid.

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# CORNS! CORNS! CORNS!

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## MUNDAY'S "VIRIDINE"

(REGISTERED TRADE MARK, "VIRIDINE," No. 36966.)

This Preparation, introduced by J. MUNDAY, now commands a large and increasing sale. Success is certain wherever introduced.

**BOTTLES ONE SHILLING EACH.**

**NEW SHOW CARD WITH FACSIMILE OF PACKAGE SENT ON APPLICATION**

**NOTICE.**—Each GENUINE Package has my Signature on the end.

PREPARED ONLY BY THE INVENTOR—

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**KAY BROTHERS, Operative Chemists and Wholesale Druggists, STOCKPORT.**  
(SUCCESSORS TO SIMS, SHAW & HORNBY. FOUNDED 1786.)

Manufacturers of Fresh Fruit		Essences, &c.	Sole Proprietors of Kay's Specialities.		
Acid Sulphurous.	Emp. Resins.	Liq. Sacch. Ust.	Kay's Compound Essence.	"Coaguline" Cement.	Linseed Lozenges. [Loz.
Calc. Bisulph.	Ess. Zingib. (Soluble).	Oxymel Scillæ.	Throat Lozenges. [ache.	Cue Cement.	Chloro - Linseed Congh
Dec. Senegæ Co. Conc.	" Rose Comp.	Syr. Ferri Iodid.	Instant Cure for Tooth-	Improved Cue-Tip Fixer.	Sapo-Lini, Toilet Soap.
" Sarsæ Co. Conc.	" Sennæ Dulo.	" Rhosados.	Linum Catharticum Pills.	Lava Cement. [Bls.	Absorbent Cotton Wool.
Smp. Plumbi.	Ferri et Ammon. Cit.	" Violæ, &c., &c.	Aspirin's Wind Pills.	Pat. Tubes for Feeding	Cheshire Hunt Sauce.
" Ficus.	" et Quinæ Cit.	Viscus (Birdlime).	Tic Pills. [Warts, &c.	Stramonium Cigarettes.	De Tabley Sauce. [&c.
" Roborans.	" Iodidum.		Painless Solvent for Corns,	Chemical Disinfectant.	Marking Ink, for Linen.

*Export Orders suitably Packed and Forwarded to all parts of the World. Prices and Discounts on application.*

# IT WILL PAY YOU

to take this Agency, because you can  
sell ten times more CELANDINE than  
any other "CORN CURE," with half  
the trouble and expense.

*See opinions of 200 Chemists who have proved it.*

REGISTERED TRADE MARK No. 31,648.

**FOR LIBERAL  
TERMS  
AND AGENCY**



**APPLY TO THE  
PROPRIETORS  
DIRECT.**

**Bottles Retail at 1/- each.**

CELANDINE is by far the best and most saleable article in the market. It is well advertised, and in daily request. Attractively wrapped in colours. Gains recommendation of all buyers.

Great advantages offered to pushing Agents, whose interests are protected. A large and profitable trade can be won without risk, competition, or outlay. Sale or return if necessary.

Attractive Handbills, Pamphlets, &c., with Agent's name, Show Cards, Posters, &c.

**HANDSOME NEW SHOW CARD IN COLOURS NOW READY.**

INFRINGEMENTS will be prosecuted. We have obtained Injunctions, Costs, and Apology against the proprietors of spurious imitations called CELANITE and CELESTINE (see decision of Mr. Justice Kay, Chancery Division, High Court of Justice).

**Sole Proprietors, CHAVE & JACKSON, Chemists, Hereford, England.**

**AGENTS WANTED IN EVERY TOWN IN THE WORLD. CORRESPONDENCE SOLICITED.**

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## GENUINE EAU DE COLOGNE

MANUFACTURED BY

JOHANN MARIA FARINA,  
JULICH'S PLATZ No. 4,

A DESCENDANT FROM THE

*Original Manufacturer of this Valuable Perfume,*  
IS KNOWN THROUGHOUT THE WORLD AS

### No. 4.

AND SOLD BY ALL THE LEADING WHOLESALE HOUSES.

In 2 oz. Bottles.

In 4 oz. Bottles.

In 6 oz. Bottles.

In 8 oz. Bottles.

In reputed  $\frac{1}{2}$ -Pint, Wickered.

In reputed Pint, Wickered.

In reputed Quart, Wickered.

In 4 oz. Bottles, Wickered.

JOHANN MARIA FARINA,  
JULICH'S PLATZ No. 4,  
COLOGNE-ON-THE-RHINE.

By Special Appointment to the Prince of Wales and to several Imperial and Royal Courts.

Possessor of PRIZE MEDALS and DIPLOMAS of the Exhibitions at LONDON, 1851; NEW YORK, 1853;  
LONDON, 1862; OPORTO, 1865; CORDOVA (Argentine Republic), 1871; and at VIENNA, 1873; SANTIAGO (Chili), 1875;  
PHILADELPHIA, 1876; CAPE TOWN (South Africa), 1877 (Gold Medal); SYDNEY, 1879; and MELBOURNE, 1880.

Sole WHOLESALE Agents for the United Kingdom and Colonies,

## FICKUS, COURTENAY & CO.

ST. DUNSTAN'S BUILDINGS, GREAT TOWER STREET, LONDON.



# COATE & CO.,

THE LONDON BRUSH WORKS,  
AXMINSTER,  
ENGLAND,

IN publishing their present Price Current, tender their best thanks for the favours received for a period of thirty-seven years,

During which time, by the patterns registered and processes patented, namely, the White Enamelled Cement, the Machinery applied, the New Machines invented, &c., they believe they have taken the lead in improving the Manufacture of Tooth Brushes more than all the other Tooth Brush makers in the world put together, whose main efforts seem to have been that of trying to imitate the style and patterns of COATE & Co., but with very imperfect success as yet.

For, as a true test of the superiority of their manufacture, COATE & Co. can say that at the present moment their customers are now supplying most of the crowned heads, princes, and nobles of Europe with Tooth Brushes made by COATE & Co.

Such being our present position in this branch of manufacture, we beg to assure our friends and customers that no efforts will be spared to hold our position and merit their continued support and approval.

We trust and think that the life-size Illustrations now issued will greatly assist our customers at the retail counter, and facilitate orders per letter at home and abroad.

The drawings of each pattern signify actual size and shape, not hardness, except the patterns G H (Goat Hair), V S (Very Soft), V H (Very Hard), Y, for Yellow or Unbleached Hair, and B H (Badger Hair). All the other patterns are made and sent out in Soft, Medium, and Hard, assorted, unless ordered to the contrary.

If best Tooth Brushes are ordered by the gross assorted, with a remark as to hardness, preferable or objectionable patterns, a better and more saleable variety can be had than if ordered by one or two dozen per No. Observe, no Sponge Brushes, Palate Brushes, Very Soft or Very Hard, would be sent unless specially ordered to be sent in such gross, and customers who order Assorted Patterns can rely on having a nice assortment sent at once; but, when ordered to pattern, more time may be required, for although COATE & Co. held in stock on January 1, 1885, nearly three thousand gross of Tooth, Hair, and Nail Brushes, made and partly made, yet the variety of Patterns, Qualities, and Hardness is so great that they cannot at all times keep up a large quantity of each Sort, Pattern, or Hardness.

## THE FOLLOWING ARE A FEW OF THE PRICES OF OUR MERCHANTABLE TOOTH BRUSHES:—

	Per doz.		Per doz.
Common Cemented .. .. .	2/	Cemented, Superfine, stamped with Elephant ..	5/
Cemented .. .. .	2/6	Warranted Best, stamped with Royal Arms ..	5/6
" London .. .. .	3/	Warranted Best Hair, stamped with Trade Mark..	6/
" Improved .. .. .	3/6	Extr Best, stamped with Trade Mark and "Coate	
" Warranted .. .. .	4/	& Co.," London .. .. .	6/6
" Warranted Extra .. .. .	4/6		

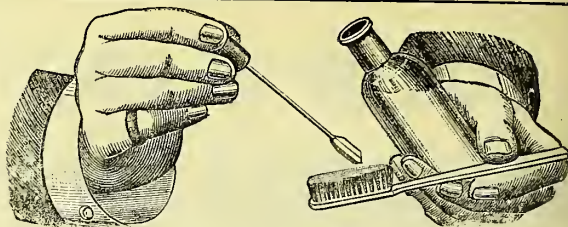
ILLUSTRATED PRICE LIST SENT FREE ON APPLICATION WITH BUSINESS CARD.

N.B.—A Large Stock of Finished TOOTH BRUSHES, HAIR BRUSHES, &c., kept ready for Merchants' Shipping Orders.

**BETHSHAN.** The certain cure for the  
TOOTHACHE.  
**BETHSHAN.** If used as a Tooth-powder  
will prevent  
**BETHSHAN.** Neuralgia and absolutely  
arrest all decay  
**BETHSHAN.** Of the Teeth, also preserve  
them healthy  
**BETHSHAN.** and sound to extreme old  
age.  
**BETHSHAN.** Everyone should try it,  
especially Smokers.

Can be obtained of all Chemists, or will be sent free by post on receipt of  
15 stamps, direct from the Proprietors, **HARDEN & CO.**, Shirley,  
Southampton.

AGENTS WANTED.



### FERGUSON'S PATENT TOOTH POWDER OR DENTIFRICE SPOON,

*For Supplying Tooth Powder or other Dentifrice to the Brush.*  
The spoon is fitted inside a suitable bottle, which forms a receptacle for the denti-  
frice, the spoon itself acting as an air-tight stopper to the bottle.  
8s. per dozen; retail, 1s. each.  
The bottles are sold empty, consequently they increase the sale of tooth powder  
from bulk. Wholesale from

**J. A. FERGUSON, 53 GT. GEORGE STREET, LEEDS.**  
And the following London Agents:—Barclay & Sons; Bourne & Taylor; Edwards  
& Sons; Hovenden & Sons; Lynch & Co.; Maw, Son & Thompson; Newbery &  
Son; Thompson, Millard & Co.; and all the principal Provincial Houses.

## IMMENSE SALE.

SOLD EVERYWHERE.

# WOODS' ARECA NUT TOOTH PASTE,

*For Removing Tartar, Whitening the Teeth, and Sweetening the Breath.*

PRICE, 6d. and 1s. per Pot.

MAY BE HAD OF WHOLESALE HOUSES THROUGHOUT THE GLOBE.

Title Secured. Price 2/6. Cases of Six, 14/-



TRADE MARK 27668.

INVENTED BY A TALENTED PHYSICIAN.

Recommended by eminent Surgeon-Dentists. Patronised by the "Monde  
élegant", as the best and most agreeable liquid Dentifrice yet introduced.

PROPRIETORS—

**BARTON BROTHERS, BRIGHTON.**

Also Sole Proprietors of the Original

"BRIGHTON GLYCERINE CREAM."

WHOLESALE FROM

Messrs. Barclay, E. Cleaver, Edwards, Newbery, Sanger, Sutton, & Co.

## ROZALIUM

(REGISTERED)

POWDER OR PASTE

IS THE BEST DENTIFRICE.

It is scientifically prepared by a Dental Surgeon, of large practice and  
great experience, and is intended to supply a long felt want, viz., a  
Preparation that will thoroughly cleanse the Teeth, and at the same time  
help to preserve them. As a stimulant to the Gums, and a preservative  
of the Teeth, Rozalium is not to be surpassed; it gives to the Teeth a  
pearly whiteness, to the Gums a healthy rosy colour, whilst it prevents  
decay by neutralizing the acids which accumulate between the Teeth, and  
imparts to the Breath a most delicious fragrance.

In Boxes, Pots, and Bottles, 1s. and 2s. 6d.

May be obtained from the Wholesale Houses, or direct from the  
Proprietor—

**J. W. MARTIN, Dental Surgeon,  
PENG.**

WHITE AND SOUND TEETH.

## JEWSBURY AND BROWN'S ORIENTAL TOOTH PASTE.



This old-established and increasingly favourite Dentifrice has been Fifty Years before the Public  
It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

**JEWSBURY and BROWN,  
CHEMISTS, MANCHESTER,**

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed.  
Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

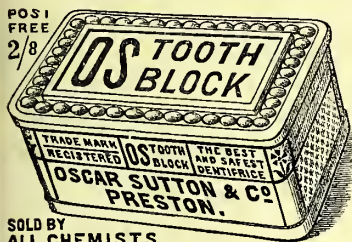
The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on  
receipt of address card, and directions for enclosure.



OSCAR SUTTON & CO., PRESTON, LANCASHIRE.

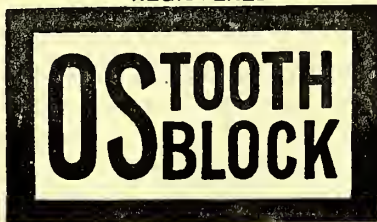
# O.S. TOOTH BLOCK.

Be particular to observe that the Registered Trade Mark and the name "OSCAR SUTTON & CO." are stamped on all that are genuine, as worthless imitations are in the market.



SOLD BY ALL CHEMISTS.

REGISTERED



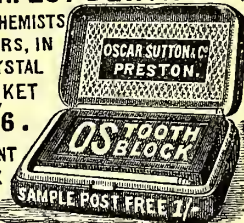
TRADE MARK.

OVER 1,000 TESTIMONIALS.

BEST & SAFEST DENTIFRICE

SOLD BY ALL CHEMISTS AND PERFUMERS, IN ELEGANT CRYSTAL TOILET CASKET  
PRICE 2/6.

ALSO IN PATENT METALLIC BOX  
PRICE 1/-



WHOLESALE—Messrs. Barclay, Butler & Crispe, Hovenden, Maw, Edwards, Newbery, Sanger, W. Sutton & Co., Evans, Lynch, Raimes & Co., Thompson, Curling & Co., Bourne, Johnson & Latimer, Burgoyne, Burdidges & Co., Burgess, Willows & Francis, Oppenheimer & Co., Ayrton & Sauoders, &c.; of all the leading Dental Houses; also of Messrs. Felton, Grimwade & Co., Roake, Tompsett & Co., Melbourne; and the principal Colonial Agencies, &c.

Write to the above address for particulars.

## ODONTOBAPH

## ODONTOBAPH

## ODONTOBAPH

The new Tooth Paste, Powder, Tooth Brush and Mouth Wash.

TO RETAIL FROM 6d. TO 2s.

## IT WILL PAY YOU

ODONTOBAPH  
REGISTERED.

To apply for an agency for the sale of ODONTOBAPH. You will sell more of it than any other Tooth Paste and Powder made.

It is being very extensively advertised.

Mrs. LANGTRY writes—

"I think the ODONTOBAPH is excellent and most pleasant to use."

Signed, "LILLIE LANGTRY."

Madame ADELINA PATTI writes—

"I have tried your ODONTOBAPH Tooth Paste, and find it much pleasanter than other Tooth Pastes."

Signed, "ADELINA PATTI."

Madame MARIE ROZE writes—

"I have much pleasure in stating that the ODONTOBAPH is a most delightful preparation, and invaluable for cleansing and preserving the teeth."

Signed, "MARIE ROZE."

MANUFACTURED BY

## THE ODONTOBAPH CO., 22 CANNON STREET, BIRMINGHAM.

WHOLESALE AGENTS:

LONDON—W. Edwards & Son; Barclay & Sons; S. Maw, Thompson & Co.

LIVERPOOL—Evans, Sons & Co.

COVENTRY—Wyleys & Co.

## ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.)

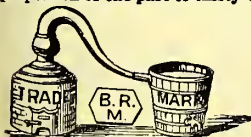
Specialy prepared for Quinine Wine, does not deposit, will keep good in any Climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

## THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

**CONCENTRATED WATERS.**—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by any in climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopoeia.



Per lb.	Per lb.	Per lb.	Per lb.
Aqua Anethi, Concent. 4/0	Aqua Cinnam. Ver. Concent. 6/0	Aqua Fœniculi, Concent. 4/0	Aqua Pimentæ, Concent. 4/0
" Anisi, " 4/0	" Cassiæ, " 4/0	" Menth. Pip. " 4/0	" Rosæ " 8/6
" Camphoræ, " 4/0	" Flor. Aurant. " 8/6	" Ang. Con. 6/0	" Rosæ Virginæ " 10/8
" Carni " 4/0	" Flor. Sambuci, " 8/6	" Virid. " 4/0	

The above are put up in Bottles of 1lb. or 1lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearson & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & Co.; J. Richardson & Co., Leicester; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

**B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester**



# EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

**JOHANN MARIA FARINA,***Opposite the Julichs Place, COLOGNE.*

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

By appointment, Sole Purveyor to Her Most Gracious  
Majesty Victoria, Queen of Great Britain & Ireland;  
Their Royal Highnesses the Prince and Princess  
of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor  
of Russia; Francis Joseph, Emperor of Austria;  
Lewis, King of Portugal; H.R.H. Frederick  
William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

**MESSRS. J. & R. McCracken,****No. 38 Queen Street, Cannon Street, London, E.C.**

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	...	...	...	...	...	...	12 bottles	} to one dozen.
" 2. Short White Bottles	...	...	...	...	...	...	12 "	
" 3. Double ditto	...	...	...	...	...	...	6 "	
" 4. Wickered Bottles (small)	...	...	...	...	...	...	8 "	
" 5. ditto (medium)	...	...	...	...	...	...	4 "	
" 6. ditto (large)	...	...	...	...	...	...	2 "	

**JOHANN MARIA FARINA,**

OPPOSITE THE JÜLICH'S PLACE.



ESTABLISHED 1810.

# H. BROOKS, PEEL & CO., COLLAPSIBLE TUBE MANUFACTURERS

PATENTEES AND SOLE MANUFACTURERS OF THE

## PORTABLE METAL SPRINKLER STOPPER,

AND DEALERS IN

GLASS BOTTLES FOR PERFUMERS AND OTHERS.

### STEAM FACTORIES:

31 Lime St., Camden Rd. (Offices), and Bartholomew Rd., Kentish Town, London, N.W.

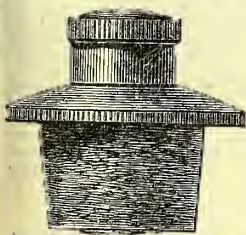
COLLAPSIBLE TUBES OF ALL SIZES.



For Perfumes, Artists' Colours, Soaps, Cosmetiques, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.

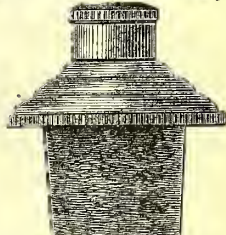
SOLE MANUFACTURERS AND PATENTEES OF

## THE PORTABLE METAL SPRINKLER STOPPER,



With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c.

These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.



## THE "TORSION" PATENT SPRINKLER.

The two designs, Nos. 18A and 19A, are those to which we direct special attention, as sizes being in general use; other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste. Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion."

This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable

for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

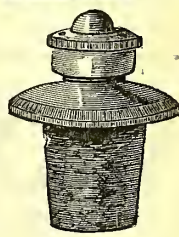
Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All Orders received direct will be promptly attended to.

**CAUTION.**—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 2½.



No. 18A.



No. 19A.



**PHOENIX** ESTABLISHED A.D. 1815 **MARKING INK**  
GENUINE INDELIBLE

THE LEADING & STANDARD ARTICLE  
PREPARED ONLY BY THE WIDOW OF THE LATE  
**JOHN MURPHY**  
CHEMIST AT THE ORIGINAL ESTABLISHMENT  
11, NILE STREET, EAST ROAD, HOXTON N.

THE ORIGINAL  
TRADE MARK.  
Estab<sup>d</sup> 1815.

NO OTHER ADDRESS — BEWARE OF WORTHLESS IMITATIONS.



**WHICH IS CHANGED BY HEAT TO A JET BLACK.**  
Put up for Retail Sale in 6d., 1/, 2/, 2/6, & 5/ Bottles.  
Also Barber's Concentrated Liquid **COCHINEAL**, for Colouring Jellies, Custards, &c.  
Put up in 6d. and 1/ Bottles.

MANUFACTURED ONLY BY THE PROPRIETORS—  
**G. BARBER & CO., 6 Worcester Drive, Club Moor, LIVERPOOL.**

Can be obtained through any of the Wholesale Firms, or from the Proprietors, G. BARBER & CO., Club Moor, Liverpool.

# HOMŒOPATHIC MEDICINES.

THE BRISTOL AND WEST OF ENGLAND

## HOMŒOPATHIC MEDICINE SUPPLY,

37 HIGH STREET, BRISTOL.

IMPORTANT TO CHEMISTS, PATENT MEDICINE VENDORS, AND HOMŒOPATHIC MEDICINE AGENTS.

In view of the increasing demand for Homœopathic Medicines, and to remedy the present unsatisfactory system upon which Agents are supplied, the Proprietor of the BRISTOL AND WEST OF ENGLAND HOMŒOPATHIC MEDICINE SUPPLY has designed and fitted up for the special use of Agents a Cabinet containing an assortment, in bulk, of all the medicines in general use; the Cabinet, which is arranged to stand on any ordinary counter, is fitted with drawers to open from behind, and contains in top drawer 36 four-ounce bottles filled with Tinctures, and the corresponding drawer containing 36 four-ounce bottles filled with Pilules—in all, six dozen bottles and 36 kinds of Medicines of the usual strength sold by Homœopathic Chemists; the bottom drawer will contain a supply of not less than two gross of bottles, in cases, two-drachm and half ounce, clean and corked ready for filling, also a supply of labels, and not less than 100 Books or Guides to the uses of the medicines; the price of the Cabinet and contents is £5 net cash, and the advantage to the Agent will at once be seen from the fact that the same quantity of medicines, if put up in the usual way ready for sale, the invoice price from the Wholesale House to the Agent would be £18 or thereabout; another advantage to the Agent is, that he will always be in a position to refill Customers' bottles when required. Agents can have the bottles replenished at any time, or new bottles of any medicine, tincture, or pilules will be sent carriage paid at 12s. per dozen. Special quotations for Medicines, ready put up for sale, also for special and proprietary articles.

For further particulars as to terms, &c., apply to the Proprietor of the

**BRISTOL AND WEST OF ENGLAND HOMŒOPATHIC MEDICINE SUPPLY,**  
37 HIGH STREET, BRISTOL.

## WATERPROOF AND GREASEPROOF WAX TISSUE

Used by Chemists, Soap Makers, and Confectioners.

It does not adhere, is cheaper than Tin-foil or other substitutes.  
This Tissue is specially prepared free from TASTE OR SMELL.

**PRICES** (Special Terms for large quantities).—Half-Sheet Post Free.—Size 20 by 30 inches, 9/3 R. am, 8d. Quire; 17½ by 30 inches, 8/3 Ream, 7d. Quire; 15 by 30 inches, 7 3 Ream, 6d. Quire; Sample Quire Post free (20 by 30 in.), 11d.

**F. G. KETTLE,**  
WHOLESALE AND RETAIL STATIONER,  
11 KINGS GATE STREET, LONDON, W.C

## LARD GUARANTEED PURE ABSOLUTELY

ORIGINAL AND BEST BASIS FOR OINTMENTS, &c.

CLARIFIED LARD, 11d. per lb. (10d. by 28 lbs.), 84/ per cwt.  
BENZOATED DO., 1/ per lb. (11d. by 28 lbs.), 94/ per cwt.

Mutton, Beef, Veal, and Deer Suet and Beef Marrow,  
Clarified Trotter and Neats' Foot Oil, 1/6 lb., 12/ gall.

Every variety of **TOILET SOAP** from 58/ to 223/ per cwt.

SPECIALTIES:—  
FRAGRANT GLYCERINE, MUSK, PINE, AND SANDAL WOOD SOAPS.

VIOLET POWDER, COSMETIQUES, POMADES, &c.

**EWEN'S** Clarified Fat Works  
AND  
Toilet Soap Factory,  
5 HATFIELD STREET, LONDON, S.E.



# PEPPER'S QUININE AND IRON TONIC. PEPPER'S TARAXACUM AND PODOPHYLLIN. SULPHOLINE LOTION. LOCKYER'S SULPHUR HAIR RESTORER.

## NOTICE TO THE TRADE.

Handsome Metallic Show-plates, 11 in. by 7 in., for each of the above Specialities, will be supplied on receipt of instructions where to send for enclosure. Early application is necessary to

JOHN PEPPER & CO., Bedford Laboratory, Bayley Street, LONDON, W.C.

## Pepper's Quinine and Iron Tonic.

A NEW SIZE of this article, to retail at Half-a-Crown, is now supplied by the Wholesale Houses.  
A large demand exists for this new popular size.

## Sulpholine Soap. <sup>6d.</sup>

NOTICE!!

This Soap is now supplied to retail at 6d. Boxes of 3 Tablets, 1s. 6d.  
SULPHOLINE SOAP is a most popular saleable article of the first repute.  
Kept by all Wholesale Houses.  
The Shilling size Tablet is discontinued.

## FR I C T I O N .

THE MOST PLEASANT MODE OF APPLYING IT TO SKIN IS BY THE  
**PANSTREPTON (or All-Pliant) FLESH BRUSH.**

The best Article ever introduced for the purpose.

PRICES FROM 22/ to 36/ per doz.

Of all WHOLESALE HOUSES or of the SOLE MANUFACTURER,  
**R. CONDRON, 2 BINGFIELD STREET, LONDON, N.**



SILVER MEDAL AWARDED.

"The Perfection of Nursery Powders."

## THE "SANITARY ROSE POWDER,"

(REGISTERED TRADE MARK).

A SOLUBLE Antiseptic Dusting Powder for TOILET and CHILDREN'S USE.

RECOMMENDED BY EMINENT MEDICAL AUTHORITIES.

Useful in cases of irritability or chafing of the skin, for unpleasant perspiration, &c. Suitable for application to the tenderest skins of Infants and Invalids, and superior to the ordinary Toilet Powders for Ladies' use.

**SPECIALLY ADAPTED FOR HOT CLIMATES.**

### EXTRACTS FROM THE MEDICAL PRESS, &c.

"It promises well for Nursery Use."—*The Lancet*.  
"An improvement on the old-fashioned Violet Powders."—*British Medical Journal*.  
"We have found it to possess the qualities claimed for it."—*Medical Times and Gazette*.

"Deserves very high commendation. It would be well if it were generally used in Nurseries and for Toilet purposes."—*Medical Record*.  
"As a high-class toilet powder this preparation is likely to enjoy a good deal of favour."—*The Chemist and Druggist*.  
"A very superior article, fragrant, soothing, cleanly."—*The Queen*.

In Boxes, 1/, 1/9, and 3/, and in large Bottles, 5/. Sample Packets, 6d.

SPECIAL AGENTS:—Rio de Janeiro: CRASHLEY & Co. Rio Grande and Porto Alegre: HALLAWELL & Co. Madras Presidency: OAKES & Co. Sydney and Brisbane: ELLIOTT BROS. Natal: T. H. DRURY & Co., Pietermaritzburg.  
WHOLESALE AGENTS:—LONDON: Messrs. EDWARDS & SONS, BARCLAY & SONS, NEWBERRY & SONS, SANGER & SONS, and all leading Wholesale Houses  
EDINBURGH: DUNCAN, FLOCKHART & Co. DUBLIN: HAYES & Co.

**Proprietors: JAMES WOOLLEY, SONS & CO.,**

Manufacturing Pharmaceutical Chemists, MANCHESTER, ENGLAND.

SHOW TABLET AND HAND BILLS ON APPLICATION.



# J. SANGER & SONS'

## NEW & REVISED PRICE CURRENT

IS NOW READY,

AND WILL BE FOUND TO BE A MOST COMPREHENSIVE LIST OF

### PROPRIETARY MEDICINES, PERFUMERY,

## DRUGGISTS'



## SUNDRIES,

### MINERAL WATERS, LOZENGES,

ETC.,

AND WILL COMPARE FAVOURABLY WITH ANY OTHER LIST AS TO  
**PRICES CHARGED.**

**POST FREE ON RECEIPT OF BUSINESS CARD.**

Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other houses.

**AGENCIES OF ALL KINDS UNDERTAKEN ON FAVOURABLE TERMS.**

**J. SANGER & SONS, 489 Oxford Street, LONDON, W.**

THE SPECIAL ATTENTION OF THE TRADE  
IS CALLED TO

## BENZINE COLLAS,

Which is acknowledged on all hands to be the most reliable Preparation for removing Grease, Oil, Tar, Wax, or Paint from every description of Wearing Apparel or Household Stuffs. It neither injures the colour or texture, nor leaves any odour or stain. It is neatly got up, and is a most saleable article. Observe the word "COLLAS" on label and cap.

**1,000 Handbills, with Name and Address,**

Will be printed for any Chemist who gives an order for

**£1 WORTH of BENZINE COLLAS,**

At the following prices, viz. :-

6d. Size .. ..	4s. per dozen, subject to Discount.
1s. Size .. ..	8s. .. ..
1s. 6d. Size .. ..	13s. 6d. .. ..

Special Quotations to Shippers and Buyers of  
6 dozen of any size and upwards.

**J. SANGER & SONS,**  
489 OXFORD ST., LONDON, W.

## KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine,  
and Druggists may safely recommend them.

### CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for Widow Welch's Female Pills has been prepared by them for 97 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

**1,000 Handbills, with Name, and 2 Tin Showcards,**  
*Supplied with all Orders for One Dozen (13) Boxes.*

**PRICE 27s. PER DOZEN, subject to usual Discount.**

Special Quotations to Shippers and for large quantities  
*on application to*

**J. SANGER & SONS,**  
489 OXFORD ST., LONDON, W.





CURTAIN ROAD, LONDON, E.C.,  
WHOLESALE AND EXPORT

**DRUGGISTS' SUNDRIESMEN,**  
**DRUGGISTS,**  
Surgical Instrument Makers, Perfumers, &c.



THE "MATER."—Screw Glass Stopper.

MANUFACTURERS OF THE

"BRISTOL," "MATER,"  
"IMPERIAL," AND "TROPICAL"

**FEEDING BOTTLES**

1885 LIST

SENT POST FREE ON APPLICATION.



"BRISTOL."—Earthenware Cap.

Careful attention given to Export orders, and, in ordering through Merchants, it should be distinctly stated on the indents that the Goods are to be obtained from

**THOMPSON, MILLARD & CO., LIM.**



# "IMPERIAL"

(REGISTERED BRAND)

# SOFT SOAP

IN TINS.



1 lb. each net.

2 do.

3 do.

3½ do.

4½ lb. each net.

6 do.

7 do.

And Firkins &amp;

Half-Firkins.

May be had through all Wholesale Druggists, Oil Merchants, and Drysalers,  
and (in wholesale quantities only) of the Manufacturers,

## THE CHISWICK SOAP CO.,

CHISWICK, LONDON, W.

Makers of the "10% Carbolic," "P.B. Olive," "B B B," "B B," and other Soft Soaps.

**GOLD MEDAL, CALCUTTA EXHIBITION.**

Also PRIZE MEDAL at the INTERNATIONAL HEALTH EXHIBITION  
for SOFT SOAPS.



ESTABLISHED 1850.

## SPECIAL NOTICE.

NOTWITHSTANDING the keen competition and the severe struggling to obtain orders, we wish to thank our friends for their continued and liberal support, and to pledge ourselves to increased diligence in studying their interest. At the same time we would draw special attention to our *liberal terms* and the *high quality* of our specialities, which are rapidly gaining favour and a quick sale.

TEN PER CENT. discount allowed on all monthly accounts, the highest discount allowed by any firm publishing a catalogue.

To large buyers we are offering special net cash lines at a reduction of from 15 to 25 per cent. less than list price.

All parcels by the carriers are sent free of the booking fee, and we are always pleased to obtain any article not in stock and forward the same day as ordered. Enclosures received and packed with any order on hand.

Orders by post receive special care, and are invariably sent off the same day as received.

## MUSICAL BELLS—The New Teething Pad.

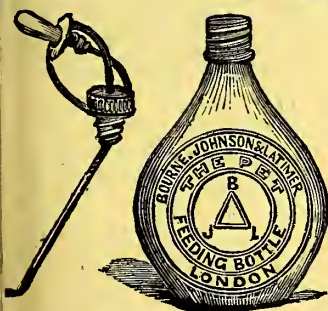
(REGISTERED.)

Black, White, and Brown Indiarubber, with Nickel-plated Bell. Very Sonorous.  
Twelve on a handsome Show Card, per dozen 4/6. These have had an enormous sale. Every Chemist in the country should try a sample dozen, which will be sent on receipt of Stamps or P.O. Order.



10 PER CENT. DISCOUNT FOR CASH.

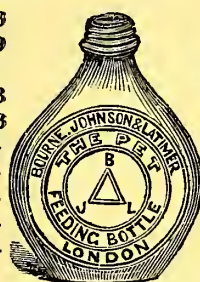
## THE "PET" FEEDING BOTTLE



Nos. 17 and 22.

No.		Per doz.
6.	Green glass bent neck, white fittings	... 3/6
7.	" " black "	... 3/9
10.	" screw glass stopper, white fittings	4/-
11.	" " black "	4/3
14.	White flint glass, china caps	... 7/6
17.	" screw glass stoppers	... 8/-
19.	" pure tin caps	... 8/-
20.	" gilt metal caps	... 12/-
21.	" gilt china caps	... 12/-
22.	" glass screw stoppers	... 12/-

Nos. 6, 7, 10, and 11 are also supplied in boxes containing 1 gross at specially reduced prices.



Nos. 19 and 20.



## THE "PET" FEEDING BOTTLE

BOURNE, JOHNSON &amp; LATIMER

(SUCCESSORS TO BOURNE &amp; TAYLOR),

WHOLESALE AND EXPORT DRUGGISTS' SUNDRIESMEN,

4 &amp; 35 CASTLE STREET, HOLBORN, LONDON, E.C.



# LEADS ON TO FORTUNE.

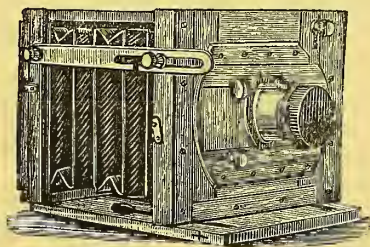
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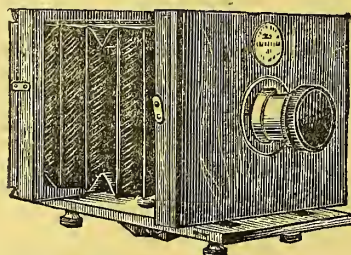
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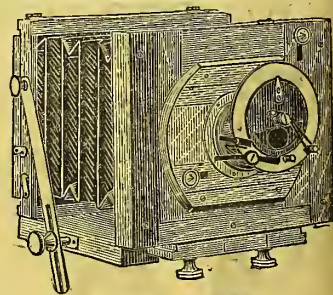
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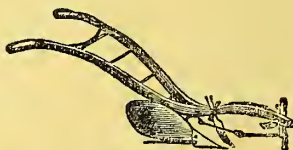
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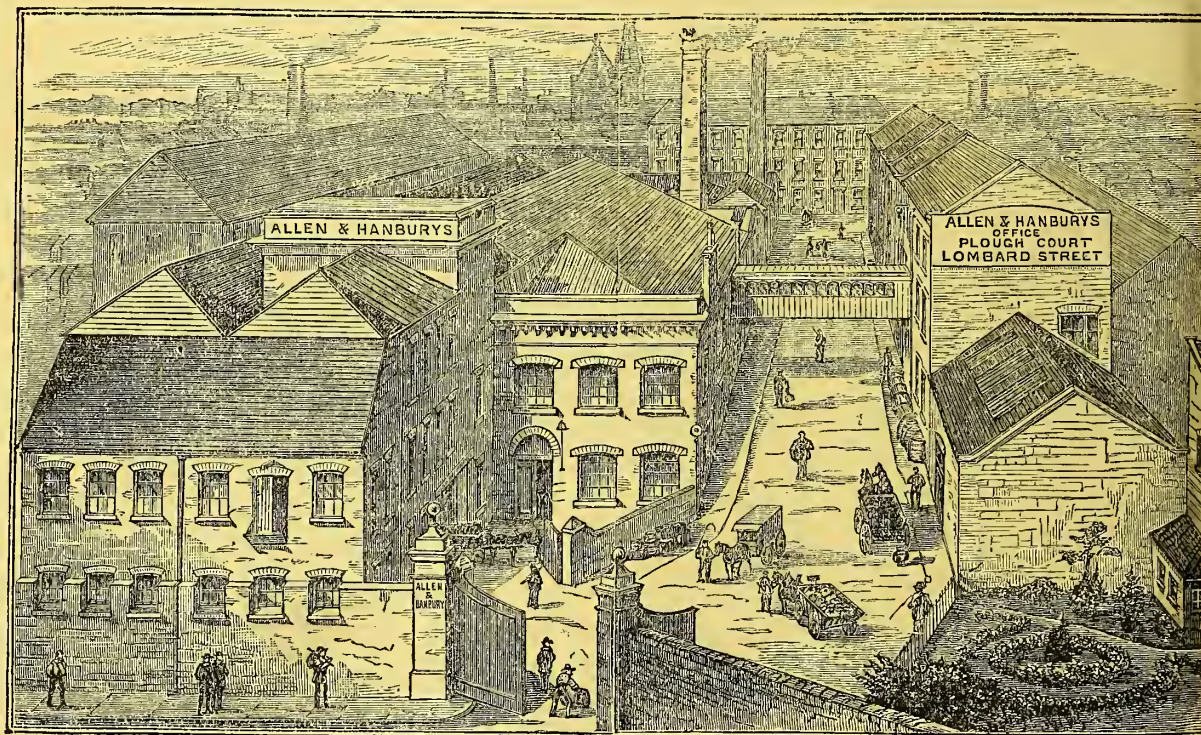
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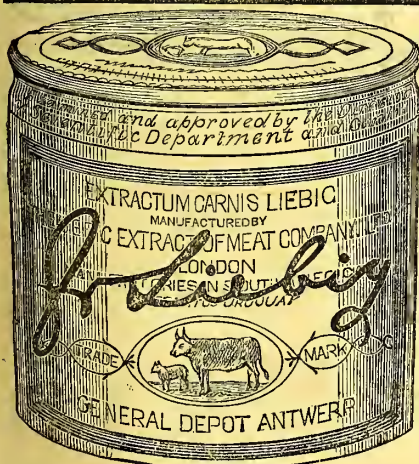
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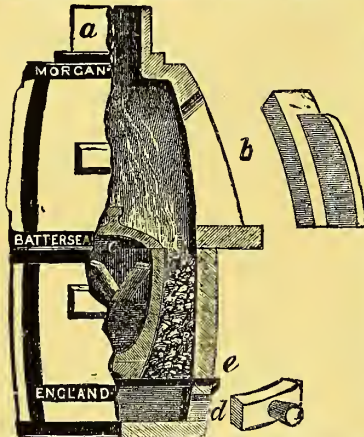
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## PORTABLE FURNACES.

IRON BOUND. EXTERIOR DIMENSIONS.

For MELTING GOLD, SILVER, COPPER, &c.

For ASSAYING, DENTAL WORK, &c.



a. Socket on which to fix iron chimney. b. Door for putting in crucibles and for coking. c. Crucible. d. Door for regulating draft. e. Iron fire bars.

No.	Diam. in.	Diam. milli.	Height in.	Hauteur milli.	For Morgan's Crucible.	Price.
A	9 1/2	235	17 1/2	445	No. 2	1 0 0
B	9 1/2	248	20	508	" 4	1 5 0
C	11	280	22	559	" 6	1 10 0
D	13 1/2	349	26	680	" 8	2 5 0
E	14 1/2	369	28	712	" 12	3 0 0
F	18	457	32	813	" 16	4 0 0



### MUFFLES.

With or without apertures.

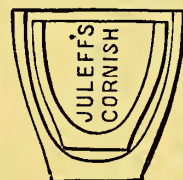


No.	Long. in.	Wide. in.	High. in.	Price. per doz.	No.	Long. in.	Wide. in.	High. in.	Price. per doz.
A	7 1/2	3 1/2	2 1/2	12	G	11	4	3 1/2	21
B	7 1/2	3 1/2	2 1/2	15	H	10 1/2	5 1/2	3 1/2	25
C	8	4 1/2	3 1/2	18	J	12	6	4	33
D	8 1/2	4 1/2	3 1/2	21	K	14	8	5	48
E	10	5 1/2	4	24	L	15	9	6	54
F	10	5 1/2	4	27					

Sizes A to F, also K, are suited for the Furnaces of the same letters.

G to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.



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FOR COPPER.

CORNISH FORM AND QUALITY (JULEFF).

Nest of Two	High. in.	Hauteur. milli.	Diam. in.	Diam. milli.	Price. per doz.
Single..	3 1/2	083	3	077	2/ per doz
	2	064	2 1/2	051	1/ "
	2	051	2 1/2	064	1/ "

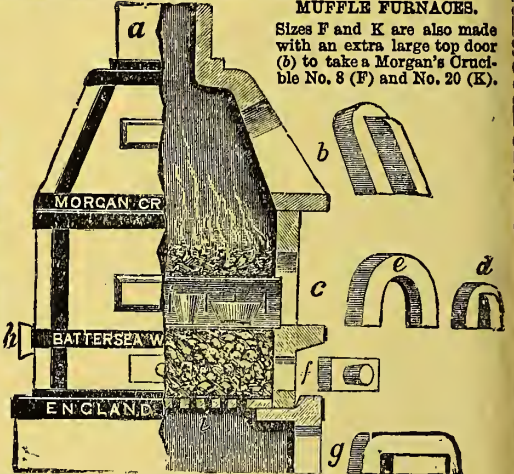
All sizes and shapes to order.



### FOR TIN.

High. in.	Hauteur. milli.	Diam. in.	Diam. milli.	Price. per doz.
3 1/2	083	3	077	6/ per doz.

Covers, 2/ per doz.



a. Socket on which to fix iron chimney. b. Door for fuel. c. Muffle. d. Door of muffle. e. Muffle arch. f. Door for stirring fire. g. Fire-clay grate.

### MUFFLE FURNACES.

Sizes F and K are also made with an extra large top door (b) to take a Morgan's Crucible No. 8 (F) and No. 20 (K).

Exterior dimensions.

Interior dimensions.

	Width and depth front to back	Largest et profondeur	Width and depth front to back	Largest et profondeur	For Battersea Muffles	Price
A	12 1/2	315	9 1/2	235	ABCD	£2 0 0
B	13 1/2	337	10	254	BCDE	2 5 0
C	14 1/2	369	11	280	CDEFH	2 10 0
D	15 1/2	394	12	305	DEFGH	3 0 0
E	16 1/2	414	12 1/2	324	EFGH	3 10 0
F	17 1/2	445	13 1/2	350	FGHJ	4 0 0
K	23	585	19	483	KL	8 0 0

### ROASTING DISHES.

Diam. in.	Diam. milli.	Per doz.	Diam. in.	Diam. milli.	Per doz.
2 1/2	064	1/3	4	102	1/9
3	077	1/6	5	127	2/

Larger sizes to order.

### SCORIFIERS. (PER GROSS.)

Diam. in.	Diam. milli.	Price.	Diam. in.	Diam. milli.	Price.
1	026	3/	2 1/2	064	5/
1 1/2	032	3/6	3 1/2	070	6/
1 3/4	038	4/	3	077	7/6
2	051	4/6	3 1/2	089	9/
2 1/2	057	4/6	4	102	10/6

### FOR LEAD.

3 in. diam., 077 diam. milli., with Covers, 2/8 per dozen.  
Other sizes to order.

### FOR GOLD.

THESE ARE PERFECTLY SMOOTH AND OF THE CORRECT POROSITY.

No.	Diam. in.	Diam. milli.	Height. in.	Hauteur. milli.	Per doz.
A	1 1/2	027	1 1/2	027	2/
B	1 1/2	032	1 1/2	032	2/
C	1 1/2	038	1 1/2	038	2/
D	1 1/2	045	2	051	2/

Covers for either size, 6d. per doz.

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Respectfully yours, &c.,

O. D. MUNSON, Assayer.

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DESIGNERS AND MANUFACTURERS OF

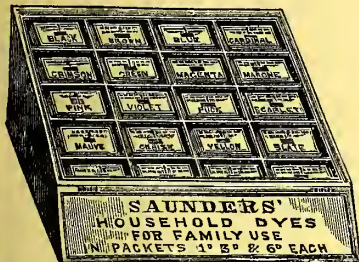
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GOLDEN	CLARET	GREY	PONCEAU	TABAC
BLUE—	CORAL	LAVENDER	POPPY	TERRA COTTA
LIGHT	CREAM	LILAC	PURPLE	TUSCAN
DARK	CERISE	MAGENTA	ROSE	VIOLET
NAVY	CRIMSON	MAUVE	RUBY	YELLOW
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4.—£700.—LONDON, S.E. (close to Crystal Palace).—Good-class Retail and Dispensing; returns nearly £700, all full prices; good house, low rent; price £600.

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 Late WHOLESALE DRUGGIST,

Having had 35 years' experience in the Wholesale and Retail Trade, begs to offer his services as **VALUER OF STOCKS, &c.**, to those who may be changing businesses.

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**BANKRUPTCY.***In Bankruptcy.]*Re **THOMAS RANSOME & CO.**, Dispensing and Family Chemists,  
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**INSTANT SALE** of this old-established (over 40 years) **CHEMIST AND DRUGGIST'S STOCK-IN-TRADE** of high-class drugs, chemicals, and patent medicines, noted proprietary articles, choice perfumery, toilet and other fancy articles, real Havana cigars, sauces, soaps, and a great variety of household and miscellaneous requisites for domestic use, amounting in value to over £500. Also the costly Spanish mahogany fittings, with ebonized enrichments, including long serving and prescription counter, replete with 86 drawers and conveniences, 2 nests of 66 drawers each, writing desks for prescription and office work, several show cases of various designs with curved and bent plate-glass air-tight recesses, ground and plate-glass casings to 2 windows, ranges of recess shelving round the shop, protected by plate-glass folding-doors, the whole finished off with 3 plate-glass divisional mirrors, and supplied by Treble, of London, at a cost of some £300, adapted for a shop 28 feet long and 20 feet 6 in. wide; together with the whole of the labelled and gilt stock bottles and contents, show globes and jars, 8-day clock, scales and weights, pill machine, pellet and other things, and all other trade utensils; a large quantity of empty Winchester and other bottles, stock of aerated waters and bottles, gasfittings, shop chairs, umbrella stand, and numerous other property in connection.

Mr. **MITCHELL** (of Manchester) is favoured with instructions from the Trustee **TO SELL BY AUCTION** on Tuesday, August 25 (Wednesday if required), commencing at 11 o'clock in the forenoon, the entire of the Chemist and Druggist's stock, on the premises as above, first in one lot as described in detached catalogue, and if not so sold, then the same will be immediately proceeded with in details, in the order as lotted.

On view Monday, August 24, from 10 till 4 o'clock; in the interim, for further information, apply to Messrs. Williamson & White, Accountants, 13 Norfolk Street, or the Auctioneer, 33 King Street West, both of Manchester.

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**PARTNER** required, to replace one retiring, in a Wholesale and Export Druggists' Sundries Business, or a fusion with another firm might be entertained. Address, in the first instance, to care of Messrs. Andrews & Ollard, Solicitors, 136 Fenchurch Street, E.C.

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**FOR IMMEDIATE DISPOSAL**, a General Retail ready-money Business. Apply, G. Fell, Chemist and Druggist, Boothroyd Lane, Dewsbury.

**SHOP TO SELL** in the suburbs of a large manufacturing town in Lancashire. For particulars apply to H., 72 Victoria Street, Blackburn.

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**LANELLY**.—A Branch Business in this town, doing well; splendidly situated, and commands trade; good house, rent moderate; to be sold cheap; part payment, remainder by instalments; an exceptional opportunity. Apply to the Proprietor, Mr. Gwilym Evans, Llanelly, S. Wales.

**TO CHEMISTS**.—An old-established (well-fitted) Business for disposal, in one of the best thoroughfares in Hull (the third port in the kingdom); rent £26; incoming low. Full particulars, apply A. B., Lofthouse & Saltmer, Hull.

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**TO CHEMISTS OF SMALL MEANS**.—A capital opening; well-fitted, double-fronted shop, good house, warehouse, conservatory; will be transferred on easy terms. Apply, Davenport, Chemist, 8 High Street, Wolverhampton.

**£150** for a genuine General Business, doing £8 to £9 per week; light profitable trade; expenses and rent low; shop in principal street, close to market. For further particulars apply, M. F., Messrs. Wyleys & Co., Wholesale Druggists, Coventry.

**WALES**.—Chemist's Business for Sale; established many years; situated in one of the best mining districts in Glamorganshire. Apply, with references, to "Cymro," care of Barclay & Sons, 95 Farringdon Street, London, E.C.

**TO BE DISPOSED OF**, by private treaty (in consequence of the decease of the late proprietor), the old-established Business of a Chemist and Druggist in one of the principal manufacturing towns of Lancashire. Apply to Lomax, Sons & Mills, Valuers, Bolton.

**TO CHEMISTS AND DRUGGISTS**.—To be Sold, a bargain, with immediate possession, the Stock and Fixtures of a well-fitted Shop in a good market town in West Suffolk; first-rate position; rent low; incoming under £200. Application for particulars to Grimwade, Ridley & Co., Ipswich, and 82 Bishopsgate Street, London.

**TO CHEMISTS REGISTERED AS DENTISTS**.—To be Disposed of, a Practice, established 4 years; introduction and instruction given in mechanical dentistry; to an immediate purchaser liberal terms will be arranged. For particulars apply, G. H. Pickburn, Dental Surgeon, Newcastle, Staffs.

**£150**.—On account of the death of the Proprietor. For immediate Disposal, a genuine Retail, Dispensing, and Prescribing Business, in the late proprietor's hands five years; corner shop, in the principal thoroughfare of Portsmouth. For particulars apply, W. B. Townley, 2 Commercial Place, Landport, Hants.

**A CHANCE SELDOM MET WITH**.—A genuine Business being sold on account of owner having taken a larger concern; handsome, well fitted and stocked shop, doing about £400 at good prices; rent and taxes about £20; to an immediate buyer no reasonable offer refused. "Proprietor," care of Lofthouse & Saltmer, Hull.

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**STOCK AND FIXTURES** at valuation; no goodwill; immediate possession may be had, owing to rapidly falling health of vendor, of an old-established genuine concern, returning over £800 per annum at good profits; best position in manufacturing town of South Staffordshire; population over 50,000; tramway traffic sets down opposite door; shop well fitted and arranged; side entrance to house; extensive warehouse, coach-house, stabling, and lock-up yard; this is confidently recommended; personal investigation invited by vendor; probable incoming £400 to £500. Apply to F. F., Messrs. Wyleys & Co., Wholesale Druggists, Coventry.

**BUSINESS WANTED.**

**A GOOD-CLASS** Retail and Dispensing Business; returning £500 to £800; Yorkshire or Lancashire preferred. Please address, with full particulars, in confidence, to "Chemist," 24 Bath Buildings, Huddersfield.

**TO LET.**

**BEXHILL-ON-SEA** (near Hastings).—To let, a House and Shop in main thoroughfare in the centre of increasing neighbourhood; thoroughly good opening for Chemist. Address, W. Parsons, The Library, Bexhill.

**EMPLOYERS WANTING ASSISTANTS.**

**OUTDOOR ASSISTANT**, active and energetic; must be good prescriber; good salary; a gentleman speaking French preferred. Apply to Schouver, Chemist, Princes Street, Hanover Square, London.

**WANTED**, at once, an active Young Man as Assistant in a Mixed country business. Apply, stating age, salary, and reference, to T. E. Buck, Chemist, Haverhill.

**WANTED**, an Operative Chemist; one used to manufacturing preferred; a good character indispensable. Please state salary required. 116/18, Office of **THE CHEMIST AND DRUGGIST**, 42 Cannon Street, E.C.

**WANTED**, an Assistant for a Mixed country trade; preference given to one that has been accustomed to a Wholesale Drug and Drysaltery business; will be required to travel a few days per week. State full particulars to B. B. Cowgill, Wholesale and Retail Druggist, Sowerby Bridge, Yorkshire.

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Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

LEATHER PLAISTERS.		No.	Full Size of Leathers.	Retail Prices.	Per doz.	Royal Balsamio Plaster.	Cod Liver Oil.	Plain Plaster.	Emp. Roborans or Calefaciens	Emp. Belladonna. No. 1.	Emp. Belladonna. No. 2.
			Inches.	d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
 Heart Shape	.....	1	3 x 4½	1 size.	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6	1½ "	"	1 0	1 0	1 0	1 0	2 0	1 6
	.....	3	4½ x 7½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	3½	5½ x 7½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	4	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
 Long Shape	.....	1	2½ x 4	1 "	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2½	4½ x 8½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	3	5½ x 9½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	4	6½ x 11	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
 Oval Shape	.....	1	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	3	7½ x 9½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
 Saddle Shape	.....	1	6½ x 12½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
	.....	2	7 x 15	8 "	"	6 8	6 8	6 0	6 0	12 0	8 0
	.....	3	8 x 16	12 "	"	8 8	8 8	8 0	8 0	15 6	12 0
Wrist		1	3 x 10½	3 "	"	2 3	2 3	2 0	2 0	... ..	... ..
Knee		2	4½ x 15	6 "	"	4 6	4 6	4 0	4 0	... ..	... ..

BREAST PLAISTERS.		No.	Size of Leather	Retail Prices.	Per doz.
				d.	s. d.
Emp. Plumbi, for Ladies' Breasts .....		1	Diam. 6½ in.	4 size	2 8
Emp. Plumbi, for Ladies' Breasts ..		2	" 7½ "	6 "	4 0
ditto spread on Chamols ..		1	" 6½ "	" "	4 0
ditto ditto ..		2	" 7½ "	" "	6 0
BREAST PLAISTERS.		No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.
				s. d.	s. d.
Emp. Belladonna, for Ladies' Breasts		1	Diam. 6½ in.	5 4	4 0
ditto .....		2	" 7½ "	8 0	6 0
ditto spread on Chamols		1	" 6½ "	8 0	6 0
ditto ditto ....		2	" 7½ "	12 0	9 0

HOSPITAL PLAISTER, on Black Cloth, 16 in. wide, doz. yds. 8/0  
 " " on White " " " 8/0  
 Every other description of Plaster used in Pharmacy or Private Formulæ spread on any material, to suit any climate.

PLAISTERS, SPREAD.—Prices per Dozen Yards. 16 Inches in width.						
NAME	Glazed Cloth	Un glazed Cloth	Linen	Swans-down	Mole-skin	Skins of Leather
Emp. Achaesivum Opt. ..	4/0	5/6	12/0	12/0	21/0	4/0
" Adhaesivum .....	3/8	"	"	"	"	"
" Ammon. c. Hydrarg ..	16/0	"	"	30/0	36/0	5/6
" Antim. Pot. Tart. ..	10/0	"	"	24/0	30/0	4/0
" Belladonna .....	18/0	20/0	27/0	27/0	36/0	5/6
" Calefaciens .....	11/0	12/0	15/0	15/0	24/0	4/6
" Cerat Saponis .....	8/0	9/0	14/0	14/0	24/0	4/6
" Dreadnought ....	9/0	10/0	14/0	14/0	24/0	4/6
" Elemi .....	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri .....	9/0	10/0	14/0	14/0	24/0	4/6
" Galbani .....	14/0	"	"	24/0	30/0	4/6
" Hydrarg. ....	14/0	15/0	18/0	18/0	27/0	4/6
" Iodine .....	16/0	"	"	30/0	36/0	5/6
" Opii .....	18/0	20/0	27/0	27/0	36/0	5/6
" Picis Co. ....	11/0	12/0	15/0	15/0	24/0	4/6
" Plumbi .....	5/6	6/6	12/0	12/0	21/0	4/0
" Potass. Iodid. ....	16/0	"	"	30/0	36/0	5/6
" Resinae .....	5/6	6/6	12/0	12/0	21/0	4/0
" Roborans .....	6/0	7/0	12/0	12/0	21/0	4/0
" Saponis Alb. ....	5/6	6/6	12/0	12/0	21/0	4/0

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We have pleasure in stating that we first offered to pay carriage on £5 worth of "Sundries" in March, 1877. We continued to do so for nearly a year. Many of our friends who lived near London asked us to allow them 5 per cent. discount in lieu of Carriage, and many of those at a greater distance sent in so many enclosures, for which we had to debit proportion of Carriage, that we adopted the plan of allowing 5 per cent. discount on all orders of £5 worth of "Sundries."

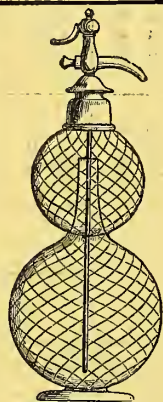
**WE ARE PREPARED TO ADOPT ANY MODIFICATION OF  
THIS DISCOUNT TO SUIT ANY CUSTOMER.**

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Orders amounting to less than £1 in value, for conveyance per Sutton & Co., Forster's Parcel Express Co., Globe Express Co., &c., will be charged with the Booking Fee of 2d. each package, charged by such carriers when we hand the parcels to them.

### REDUCED PRICES.

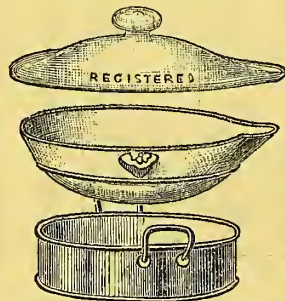
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	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Caned, each ... ..	9/0	10/8	16/2	27/3

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Wired, each ... ..	8/6	10/2	15/4	25/6

## "MAY-ROBERTS" WATER BATH, REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover. 5-pint, 5/6 each.

**MAY, ROBERTS & CO.,**  
9 CLERKENWELL ROAD, LONDON, E.C.



# EXCHANGE COLUMN.

**TERMS.**—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the Advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

## Dental and Surgical.

Druitt's forceps, Maw's No. 11; lowest price. "Tooth," 78 High Street, Dorking.  
Dentist's workroom lathe, 12 impression trays, 3 lbs. composition, liquid nitrous oxide apparatus, operating chair, dentist's showcase and specimens, aneroid barometer, set of 8 tooth forceps, 50 galls. Barth's nitrous oxide gas and bottle. Lodge, Dentist, Rotherham.

## Drugs and Chemicals.

A few 4-oz. bottles of Symes' musk, at 20s. each. Richardson, Chemist, Alford.  
Potass. iodid., insect-powder, gum benzoin, bismuth subnit., ol. lavand.; cheap. Lingdale, Cleveland.  
Twenty-two bottles H. G. Hotchkiss' oil peppermint, 16s. lb.; 30 lbs. pot. iodid ang., 10s. lb.; 20 lbs. pot. bromid., 1s. 6d. lb., net cash. 115/40.

## Optical.

Seven dozen pairs spectacles, cost 42s. per doz., all in good order; 5d. will be taken. 112/14.

## Proprietary Articles.

Quantity of patents—Eno's, Beecham's, Seigel's, Steedman's, &c.; also B.P. tinctures. 114/35.  
Three 1-cwt. bags Thorley's lactifer; what offers? 115/20.

For sale or exchange, Myer's Royal cattle spice, in quantities of 1 cwt., or open to an offer for about 1 ton. Address, P. A. Stevens, 72 Mansfield Road, N.W.

## Apparatus.

Amateur printing-press, self-inking, with type complete. 111/37.

## Educational.

Botany.—The indigenous official plants, mounted on paper 5s., on cardboard 7s. 6d.; wild flowers equally cheap. Higginson, Newferry.  
Set of illegible autograph prescriptions (original), 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (oath and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1d.; lot of cheap, almost new, books; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.  
L.D.S. Diplomas.—Copies of questions given at last examinations in Dublin and Glasgow, 2s. 6d.; articulated and disarticulated skulls; books suitable for candidates preparing for L.D.S. examinations, with valuable notes, by a successful candidate. L. D. S., 7 Church Street, Rotherham.

## Literature.

About 50 vols. of books for cash or barter; list on application. 113/12.  
Offers wanted, for *Pharmaceutical Journal*, complete from 1841, bound to 1885. J. J., 4 Regent Street, Rochdale.  
*Pharmaceutical Journal* last four years, unbound, clean, 7s. 6d., carriage paid; also one copy posted every Monday, 1s. 6d. per year; or offers both. Loveland, Castleford.

*Chemist and Druggist*, July, 1880, to December, 1884, unbound, complete; *Pharmaceutical Journal*, January, 1879, to July, 1881, unbound (4 numbers missing); ditto, vol. 1, 1870-71, bound; ditto, vol. 2, 1871-72, bound; *Chemists' Journal*, Nos. 1 to 66 complete, unbound; what offers? J. F., 451 Liverpool Road, N.

## Soda-water Plant.

Barnett & Foster have some second-hand soda-water machinery of their own for sale. Apply, 26 r Eagle Wharf Road, Hoxton, N.  
Second-hand soda-water plant—several in stock. Address, Bratby & Hinchliffe, Sandford Street, Ancoats, Manchester.  
Mondolot's No. 2 soda-water machine, with handle, also fast and loose pulleys; double bottling-machine for bottles and syphons, virtually new, cost over 800., price 450. Meadows, High Street, Leicester.

## Shop Fittings.

Lamb and iron bracket, as Maw's fig. 1; 3, 2-gal. carboys, pear shape; 3, 1-gal. ditto, upright; will exchange for pint and half-pint shop-rounds. 115/35.

Number of drawers, shelves, &c., for store room; a large variety of surplus stock for exchange or cash; a large office desk, knee-holed, 7 feet long, 9 drawers, mahogany top; list for stamped wrapper. Wilks, Burnley.

Prescription-desk, superior, 10s.; marble mortar, 16 in., 12s.; 3 window carboys, 33 in. high, 12s. each; contents of nice shop; say what is wanted, and low price will be quoted. Floyd, Bury St. Edmunds.

Bent plate-glass counter-case, silvered-glass door, as A 17 Maw's, good condition, with handsome glass tablet, in gold and colours, "Select Toilet Requisites," price 4l. 10s., cost 8l. 10s.; 12 in. high, 26 in. wide, 38 in. long; show-stand, as A 37, slightly damaged, 14 in. high, 16 in. wide, 33 in. long, price 1l. 5s., cost 3l. 10s.; Fletcher's patent hot-air gas-heating stove, good condition, 1l. 1s., cost 2l. 10s. Payne, Chemist, Market Rasen.

For Sale or Exchange.—All numbers, &c., refer to Maw's illustrated list, 1882.—Bent plate-glass counter-cases, polished mahogany, 3 ft. long, 30s.; as fig. A 2; also as fig. A 3, 3 ft. long, 35s.; 3 ft. 6 in. long, 40s.; 4 ft. long, 50s.; as fig. A 5, 9d.; fig. A 6, 3 ft. long, 60s.; 4 ft. long, 70s.; as fig. A 7, 4 ft. 6 in. long, 80s.; 5 ft. long, 90s.; 6 ft. long, with table in centre, as fig. A 18, 5l. 10s.; 7 ft. ditto, ditto, 6l. 10s.; fig. A 8, 6 ft. long, 6l.; tooth-brush cases, fig. A 9, 35s.; fig. A 10, revolving front, 50s.; as fig. A 10, to open at back, 30s.; as fig. A 12, 30s.; as A 13, 3 ft. long, 60s.; 3 ft. 6 in. long, 70s.; as fig. A 15, 3 ft. 6 in. long, 60s.; 4 ft. long, 80s.; 2 ft. 6 in. long, 50s.; A 16, 3 ft. long, 60s.; as A 17, 3 ft. long, 70s.; 4 ft. long, 80s.; as fig. A 18, 5 ft. long, 5l.; 6 ft. long, 6l.; 8 ft. long, 8l.; desks and cases, A 31, 60s.; 3 ft. long, 3 ft. high, 2 ft. from back to front, 70s.; 2 show-stands, A 38, 35s. each; sponge-cases, A 41, 60s.; A 42, 75s.; A 43, 95s.; dispensing-screens, 4 ft. long, A 54, 70s.; 4 ft. 6 in. long, 80s.; as A 55, 6 ft. long, 5l.; 7 ft. long, 5l. 10s.; 7 ft. 6 in. long, 6l. 10s.; soda-water stand, A 59, 30s.; extra large size, 30s. E. Natali, 207 Old Street, London, E.C.

Second-hand Glass.—Specie jars and covers—

Two 23½ in., scrolls and plinths, 60s.; 2, 23 in., arms and stands, 65s.; 2, 24-in. scrolls, 40s.; 1, 31-in. scroll, glass cover, 35s.; carboys, cut stoppers—1, 16 gal., 40s.; 2, 14 gal., and stands, 3l. 10s.; 3, 5 gal., 37s. 6d.; 2, 4 gal., stoppered and stands, 17s.; 3, 3 gal., 1, 2 gal., and stands, 27s. 6d.; 125 quart rounds, labelled, 90s.; 20 doz. rounds, washed, no labels, one-third discount off new. Hawke & Son, Wild Court, London, W.C.

Second-hand Fittings.—Spanish mahogany

counter, 19 ft., 17l.; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 10l.; mahogany-fronted dovetailed drug-drawers, cover-boards, grained lockers; 17 ft. 6 in., 2 nests, 74 and 14, imitation and aerated-water shelves, 8l. 10s.; 14 ft. 5 in., 2 nests, 112, 10l.; 10 ft. 8 in., 2 nests, 9l., deal grained on skirtings, 5l. 10s.; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboards under, 12 ft. 8 in. long, 8 ft. 10 in. high, 9l.; counter-cases, as Maw's A 4—42 in. long, 23 in. high, plate-glass shelf, no carving, 6l.; ditto, 48 in. long, 27 in. high, wood shelves, tablet, carving, 8l.; plate-glass case, 43 in. by 16 in., trays, 2l.; ditto, ebonised, 73 in. by 22½, 5l.; dispensing-screen, written plate-glass panel, 65 in. long, 3l.; ebonised counter-front, sheet-glass sashes, 57 in., 10l.; counter-case, sloping flaps and tablet, 82 in. by 17 in., 2l. 10s.; upright counter-case, 78 in. by 33 in., 6l.; desk and case, 26 in., 2l.; desk with brass rail, 30 in., 35s.; aerated-water fittings, 29 in., 30s.; 2 mahogany chairs, carved backs, 30s. Hawke & Son, Wild Court, Great Wild Street.

A first-rate plate-glass counter-case, 5 ft. long, as fig. A 1, 9l. 10s.; 12-ft. wall-case, stout sheet glass, stained and polished mahogany, 10l.; 11-ft. wall-case, 7l.; 7-ft. 6-in. ditto, ditto, as fig. A 86, 7 ft. high, 8l. 10s.; a bent plate-glass counter-case, 7 ft. 2 in. long, 22 in. wide, 16 in. high, 9l., worth double, silvered-glass back, and glass ends; several centre cases and exhibition cases, 6 ft. long, 3 ft. deep, 10 ft. high; 6 ft. long, 18 in. wide, black and gold, airtight; a very elaborate dispensing-screen, glass case at each side, silvered plate-glass centre, with marble slab in front; the cases have silvered-glass backs, movable shelves, and tablets on the top, with shelves the whole length of back for dispensing-bottles, 7l.; a quantity of new and second-hand drawers and wall-fixtures, very cheap; oak and mahogany-fronted counters; bottles; jars; carboys; black store-bottles, japanned caps, 15s. doz.; shelving; pilasters; cornice; lockers; a good lot of second-hand fittings, consisting of counters, drawers and shelving over; dispensing-screen; counter and desk cases; wall-case in first-class condition, ready for fixing, 50l.; specie-jars, carboys, scales, &c. E. Natali, 207 Old Street, London, near Pitfield Street.



**Formulæ.**

Soluble essences (non-alcoholic, for mineral waters); lime-juice cordial; chlorodyne (perfectly transparent); cascara sagrada cordial; concentrated waters (1 to 40); essence rennet (permanent, no salt); hop bitters; liquor carbonis (resembles Wright's); chemical liquors for syrups (stable); lac rosarum (inseparable, made in few minutes); ink (resembles "Dichroic"); elixir phosphori, invigorating tonic; sponges bleached (golden yellow); liquid dentifrice (like "Floriline"); marking-ink, *sine* silver, writing executed defies chemicals; saline (Eno's or Lamplough's); magic neuralgic drops; lime-juice and glycerine (white as milk, inseparable); pill-coating, pearly white, no mastic or mucilage; crimson marking-ink; hair-restorer, colourless, no deposit, *sine* silver; oleum flavum concentratum, stable colour for pomades; soluble ginger (like Hay's); liquor copaiba comp. c. huchu et matico (like Richardson's); liquor santal. flav. (resembles Hewlett's); taraxicum podophyllin, iron quinine (both resemble Pepper's); many perfumes, also toilet requisites; state wants; lists issued; all inexpensive to prepare; 5s. each (5 for 1.); analyses undertaken. Readers are warned against cheap substitutes. I was first to advertise formulæ in this journal. "Analyst," Mr. Warnes, 6 Rochester Square, N.W. (Only prepaid inquiries answered.)

Well-tried recipes of preparations in daily demand:—"Corn and Wart Eradicator" (similar to Hargreave's), never fails, painless, cleanly, may be sold with confidence, always gives satisfaction; "Whooping-cough Syrup and Embrocation," certain cure, rapid action, no dangerous ingredients; "Blood Cleanser," superior to any advertised preparation, without the danger attending many; "Physician's Prescription for Spentorrhea," and kindred diseases, hundreds of cases have been cured by this remedy; "Mist. Bismuth. Alh.," excellent for rapidly curing indigestion, vomiting, dyspepsia, &c., an elegant preparation; "Ringworm Specific," two or three applications will cure the worst case; "Tic Pills," most reliable and recommendable, when all else has failed; "Itch Ointment," improved form of old-fashioned popular unguent, disinfectant and deodorant; "Chlorodyne," equals Brown's in every respect, freely miscible with water, easily made; "Ess. Senna Dulc.," non-gripping aperient for children and adults, keeps well, 10d. lh.; "Peruvian Gout and Rheumatic Pills," preferred by many to Blair's, recommended with much confidence; "Quinine and Iron Tonic" (like Pepper's), bright and unchangeable, warranted excellent; "Anti-cholera Drops," certain preventive of diarrhoea, infallible in cramp; "Podophyllin, Aloes, and Taraxacum," for all liver derangements and dispersing bile; "Essence for Deafness," simplest, safest, and most reliable remedy ever advertised; "Hair-producer," warranted to produce a healthy growth and strengthen weakly hair. Recipes, 1s. 1d. each, six for 5s. post free, with full directions for making doses and all necessary information. T. Brooks, Chemist, Louth, Lincolnshire.

Following valuable recipes, warranted to give satisfaction; 9d. each, or 6s. dozen:—Quinine and iron tonic, pleasant, does not produce headache; liver pills, soothing, gentle action, none better; glycerine cream, perfection of toilet articles, used in summer and winter; nursery hair-wash, non-poisonous, but fatal to insect life; limes and glycerine, really splendid; hair-restorer, clear liquid, and effectual; pill-coating, full instructions enabling anyone to coat them; Easton's syrup, made in a few minutes; food-preserved, costs 8d. lh.; teething powders, best going, everyone should put them up, cost trifling. A. Lee, 10 Queen Street, Chesterfield.

**Miscellaneous.**

Ouc Loysell's 3-pint copper-bronzed coffee-urn, 15s. 45/30.

Stuffed fox and four rabbits in glass case; 30s. Lodge, Chemist, Rotherham.

Two-flask extra-strong vulcaniser, brass; 30s. Banks, Chemist and Dentist, Stockport.

One guinea for instructions to cut wax in sheets for vulcanite work. Entwistle, 39 Shaw Street, Liverpool.

Potas. Iodid., 11s. lh.; nail-brushes, fig. 39, 6s. doz.; 1-gallon copper measure 10s., 2-gallon 15s.; write for list. Day & Co., Wimbledon.

52-inch all-bright Keen's bicycle; cost 16*l*., will accept the first 5*l*.; given up riding. "Chemist," 34 High Street, Putney.

A chamber organ, partly built, 108 wood pipes, 126 metal pipes; particulars for one stamp. Samuel Oldham, Druggist, Mottram, Manchester.

Pillar electric lamp, 4 Grove cells, never been used; also a number of English and foreign coins and tokens; what offers? X., 7 Frodington Road, Southsea.

About 20 barrels bloomless mineral oil; also a few barrels of turpentine; samples and price on application. Sneath, Chemist, Newark.

Marble mortar, diameter outside 20 inches; also 1 petroleum pump, measures 4 pints, made by Forest, Workshop; price on application. Sneath, Chemist, Newark.

Valuable collection microscopic slides; anatomical, botanical, geological diatoms; insects, all first-class mounts, 7s. and 10s. dozen, cost double. 258 Newtown Row, Birmingham.

Sale cheap, or exchange for dental chair or counter-front cases, 12 ft.; thoroughly good double breechloader; 4, 4-gallon pear-shaped carboys, plain stoppers, 3s. each. Howe, Ramsey, Huntingdon.

Chemist and Druggist, 1882, 1883, complete, 1884 (February and March missing), 1885, up to date, 1879, November and December, 1*l*. the lot, or exchange to 30s.; pure-bred Scotch colley dog, aged 9 months, very handsome, 50s., honestly worth 5*l*., reason for disposal. "Delta," 43 Tontine Street, Folkestone.

About 3 doz. Chemists and Druggists' Optical Association spectacles, in good condition; 1 cwt. nutrimentis (Bowick's), in penny packets; 6 half-crown, 5 shilling, packets restore horse powders (Bowick's); 5 gross Fardon's penny fire-lighters; will exchange for saleable patents, or low for cash. Birkbeck, Chemist, Lincoln.

Three large window carboys, hold 7½ gallons, with mahogany stands and iron bars to rest on; also Braud's "Chemistry" (3 vols.), Gray's "Supplement," "Drill and Rifle Instructor," Fox on "The Teeth," Duffin on "The Spine," Thomson's "Chemistry," Pharmacopœia by Powell, Pharmacopœia (London) by Tenthill, Hasselby, St. Leonard's.

A Curr's mill, by Bailey, Salford, wants new pan; 3, 10-gal. iron cans, with brass screw hangers; 1 set of Maw's guinea drachm-scales, with set of stamped weights; about 25 lbs. Barbaños aloes, worth 1s. 6d. per lb. (list price); 16 oz. euclynone murias, and about 8 oz. castor. Apply to G. Morley, 50 Lumley Road, Skegness.

Plate-glass shelves, 5, 22 in., 3, 42 in., bevelled edges; also *Chemist and Druggist*, 1880, April, September, October, December, 1881, June, August, October, November, December, 1882, complete (excepting November), 1883, January, March, April, July, December, 1884, January, March. What cash or other offers to 22 Huddersfield Road, Dewsbury.

**WANTED.**

Wills' and other pharmaceutical hooks, good condition, 116/16.

An entire stock of second-hand fittings for a branch. W. G. Blyth, 33 Aire Street, Goole.

Two 4-gallon pear-shape and two 4-gallon swan-neck carboys. Wells, Chemist, Blackburn.

Cocking's pill-piper, 4-grain, second-hand. Geddes, Oldham.

Specie-jar, about 27 in., and stand, in good condition. Tyler, Felixstowe.

"Year-book of Pharmacy," 1881 to 1884 inclusive. Wells, 50 Elgin Crescent, W.

Flat plate-glass counter-case, with trays, size 2 ft. wide, 8 or 10 inches high, 3, 4, or 5 ft. long. Murch, Glastonbury.

Second-hand Pindar's piping-press, fig. c, No. 2 or No. 3 size. Bailey, Chemist, Commercial Place, Landport.

For cash, cheap, ½ or ¼ plate Lancaster's camera. "Chemist," 6 Charlwood Terrace, Putney, S.W.

Old gold, platinum, silver, and dental metals; highest value given; returned registered post if offer not accepted. Entwistle, 39 Shaw Street, Liverpool.

Clean saleable patents, dental chair, nitrous oxide gas, borax, birdlime, tooth-brush counter-case, outside lamp, ruby lenses. Particulars to Spencer, Chemist, West Bromwich.

**Addresses and Information Wanted.**

Vaseline Substitutes.—Wanted, manufacturers of white and yellow vaseline substitutes to send samples and quotations to W. H. Legat, Wholesale Druggist, Bolton.

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**HOW TO MAKE THE SPECTACLE TRADE PAY!** Sell ONLY the **LUMINOUS CHEMICAL CRYSTAL SPECTACLES**. Sold only by Chemists. Give half profit, and, by our system of business, prices cannot be cut. Sole Agency granted for small towns. Our New **POCKET OPERA GLASS** and **TELESCOPE**, with Case, to retail at 1/3 each, 8/6 per dozen; sample half-dozen, with Show Card, post free, 4/9. A Great Novelty! Selling by Thousands!

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Turco Sponge Gloves, No. 2.. ..	(best white, large, with red binding) .. ..	4/8 "
Turco Sponge Gloves, No. 3 C quality	(thin white) .. ..	3/0 "
Turco Sponge Gloves, No. 4 C quality	(thin white, large, with red binding) .. ..	4/0 "
Baden Sponge Gloves, No. 1 .. ..	or Turkish (best white, extra stout quality, large) .. ..	5/0 "
Baden Sponge Gloves, No. 2 .. ..	or Turkish (best white, extra stout quality, medium and small) .. ..	4/6 "
Oriental Sponge Gloves .. ..	(very superior stout white, with red stripes) .. ..	6/8 "
Cleopatra Sponge Gloves .. ..	(fine quality, white with red stripes) .. ..	5/0 "
German Sponge Gloves.. ..	(cream or unbleached white, soft and spongy) .. ..	5/0 "
Empress Sponge Gloves .. ..	(crisp white, with fancy stripes) .. ..	5/0 "
Monarch Sponge Gloves .. ..	(drab, with fancy border, very absorbent) .. ..	6/0 "
Baden Flesh Gloves, or Calefacio No. 1 .. ..	(best soft brown—friction) .. ..	6/0 "
Baden Flesh Gloves, or Calefacio No. 2 .. ..	(hard brown—friction) .. ..	6/0 "
Baden Flesh Gloves, C quality .. ..	(soft brown—friction) .. ..	5/4 "
Paragon Bath Gloves .. ..	(soft brown, with red and white stripes) .. ..	6/3 "
Union Bath Gloves, No. 1 .. ..	(one side stout white and the other side best soft brown) .. ..	7/0 "
Union Bath Gloves, No. 2 .. ..	(one side white honeycomb, and the other side hard brown) .. ..	7/0 "
Brighton Bath Gloves .. ..	(white honeycomb) .. ..	5/0 "
Roman Bath Gloves .. ..	(cream or unbleached white, stout elastic honeycomb) .. ..	6/0 "
Ottoman Bath Gloves .. ..	(fancy brown and white—friction) .. ..	6/8 "
Criterion Bath Gloves .. ..	(fancy brown and white) .. ..	6/8 "
Albany Bath Gloves .. ..	(fancy white linen) .. ..	6/8 "
Princess Washing Gloves .. ..	(fancy pink and white honeycomb) .. ..	4/0 "
Princess Washing Gloves .. ..	(fancy pink and white honeycomb, large) .. ..	5/0 "

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# CORN AND BUNION PLASTERS.

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## HENRY YOUNG,

A.D. 1846,

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Thin, 12 in box (round 6d. boxes) ..	2/4 per doz. boxes.
Thick, 12 in box (original 1s. fancy boxes) 3/4	"
Thin, 1 gross in box .. ..	1/10 per gross.
Thick, 1 gross in glass-top box .. ..	3/0 "

Arnicated White Felt Bunion Plasters.

Small Thin, 6 in box (round 6d. boxes) ..	2/4 per doz. boxes.
Thick, 6 in box (original 1s. fancy boxes) 3/8	"
Large Thin, 1/2 gross in box .. ..	4/6 per gross.
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**CHEMICALS, PHARMACEUTICAL PREPARATIONS, and FRUIT ESSENCES, bottled and in bulk for Export**

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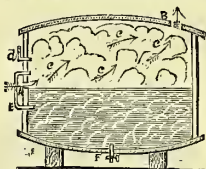
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Samples sufficient for practical test on application. Also Post samples of Liquid Extract of Rennet for producing the largest proportion of Curd; and of Vegetable Butter Colouring in Oil, perfectly innocuous, and imparting no flavour whatever to the butter. Very little required to give requisite tint.

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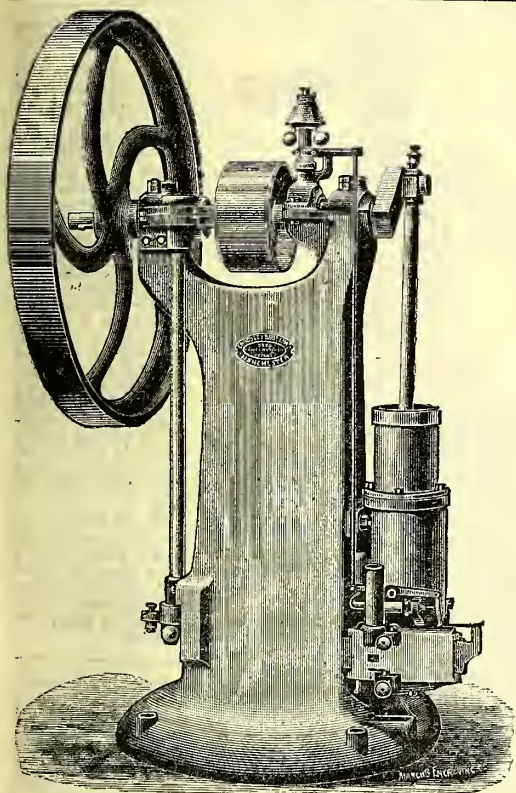
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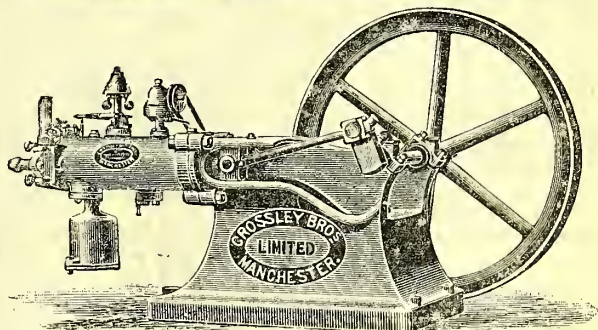
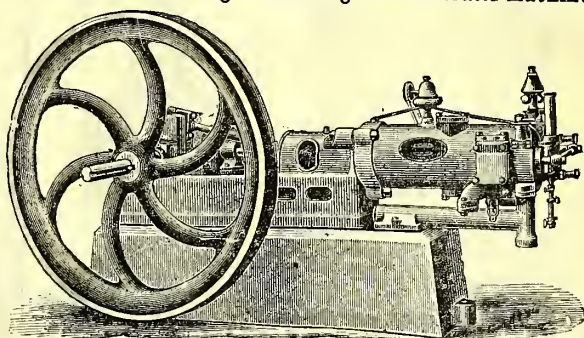


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Prices for Syphons: Small Jaws, 3s 6d; Large do., 4s 6d; Medium do., 5s 6d; Superior Nickel-plated Tops, 4s 6d; Strongly Silver-plated Tops, 9s per doz. extra.  
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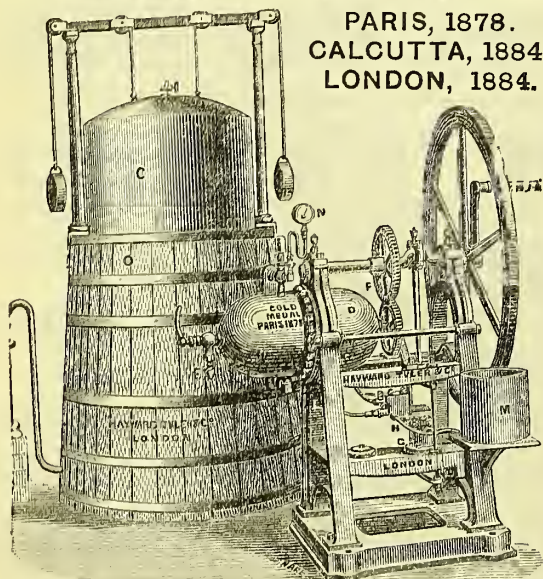
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(TITLE REGISTERED.)

Obtained the **HIGHEST AWARD** at the International Health Exhibition, London, 1884.



The high reputation this bottle has achieved is due to the fact of its being in every particular the most perfect yet introduced; and when compared with others in the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most easily opened, the lightest pressure on the handle being sufficient; it produces a more highly-charged gaseous water than is usually obtained from syphons; it compares most favourably in appearance with any, and the metal top being entirely free from lead, the prejudice against syphon drinks is at once removed, as the liquid passes over pure tin only.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See drawing.

**NOTE.**—Syphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; if forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 18s. to 24s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

**PRICES (WHITE, BLUE, GREEN, OR AMBER):—**

	By the gross,	per doz.	Less than 1 gross,
Quart size	£1 2 0	per doz.	£1 4 0
Pint size	1 1 0	...	1 3 0
Half-pint, Pear shape	1 0 0	...	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	...	1 8 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished from 9s. per doz. extra. A charge is made for packing, except when ordered in our patent bin cases (holding one dozen each, price 2s. 6d. each).

Special Prices and Terms to Large Buyers.

Please Note.—B. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

**BARNETT & FOSTER,**  
 MINERAL WATER ENGINEERS,

Manufacturing Chemists, and General Providers for the Aërated Water Wine, Beer, and Cyder Trades,

"Niagara Works," 26<sup>th</sup> Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

See also pages 53 and iv.



# SYRUPS FOR ICED FRUIT DRINKS

## FOR DISPENSING FROM THE SYPHON OR GASOGENE.

The following Syrups are specially prepared for use with the Pillar Fountain or the Syphon Bottle, and are kept in stock and can be forwarded same day as order received:—

Lemon  
Orange  
Ginger  
Pineapple  
Pear



Raspberry  
Strawberry  
Cherry  
Currant

Supplied in two-sized Bottles, handsomely yet neatly "got up," for retailing at 1s. and 1s. 10d. each.

Discount to the Trade for cash with order, 25 per cent.

**OBSERVE!!!** It is advisable to cultivate a trade in Syphons when filled with mineral waters only; it pays better; the frothy heading produced when saccharine drinks are emptied from syphons is well known. The drink is much nicer when the syrup is poured into the tumbler and the aerated water drawn on to it. This system of dispensing iced fruit drinks should be in the shop of every Chemist and Druggist; a small side counter being devoted to this purpose during the hot season. An immediate profit is made, with the prospect of orders for both syphons and syrups for the residence of customers.

We unhesitatingly affirm that the "London Made" Syphon (title registered) is the most perfect of any in the market; the latest improvement in the foot being very much appreciated, as it prevents the drips from the spout soiling the table.

This Syphon obtained in competition, the Highest Award at the International Health Exhibition, London, 1884.

(See opposite page for further particulars.)

*Send for Illustrated Catalogue of Soda Water Machinery and all accessories to*

# BARNETT & FOSTER,

Aerated Water Engineers, Manufacturing Chemists, and General Providers  
to the Mineral Water, Wine, Beer, and Cyder Trades,

"NIAGARA WORKS," 26<sup>T</sup> EAGLE WHARF ROAD, LONDON, N.



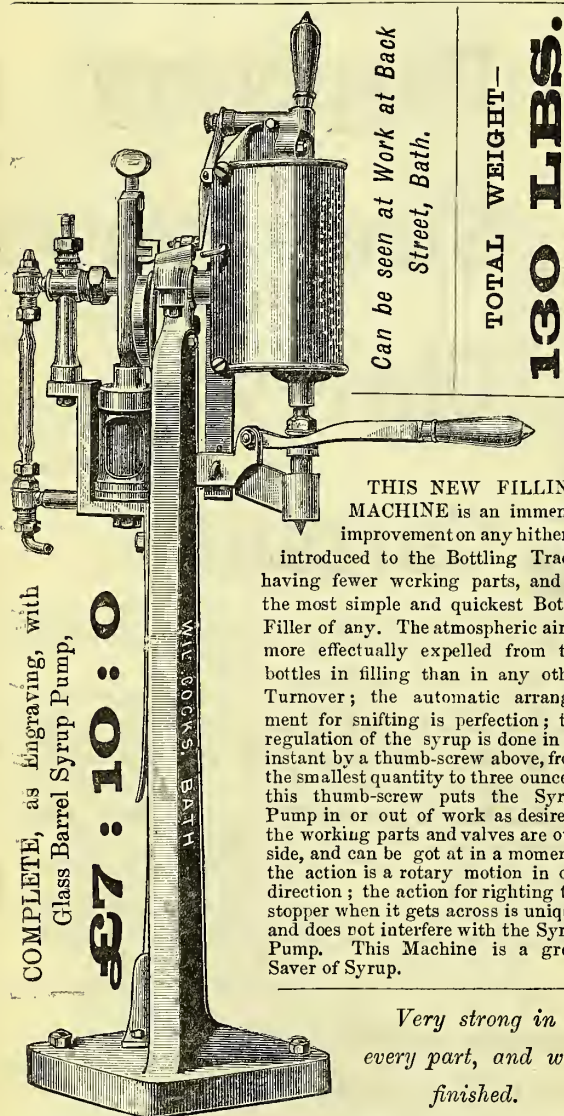
# WILCOCKS'

NEW REGISTERED DESIGN AND PATENT

APPLIED TO

## TURNOVER FILLING MACHINE

FOR FILLING INTERNAL STOPPER BOTTLES.



THIS NEW FILLING MACHINE is an immense improvement on any hitherto

introduced to the Bottling Trade, having fewer working parts, and is the most simple and quickest Bottle Filler of any. The atmospheric air is more effectually expelled from the bottles in filling than in any other Turnover; the automatic arrangement for snifting is perfection; the regulation of the syrup is done in an instant by a thumb-screw above, from the smallest quantity to three ounces; this thumb-screw puts the Syrup Pump in or out of work as desired; the working parts and valves are outside, and can be got at in a moment; the action is a rotary motion in one direction; the action for righting the stopper when it gets across is unique, and does not interfere with the Syrup Pump. This Machine is a great Saver of Syrup.

*Very strong in every part, and well finished.*

We have laid down Special Additional New High-Class Machinery to meet the increased demand for our Goods.

# N. G. WILCOCKS,

SOLE MAKER AND VENDOR,

BATH, SOMERSET.

# N. G. WILCOCKS, BATH. AERATED WATER MACHINERY.

READ THE SUBJOINED TESTIMONIALS.

Battersea, London, 4th February, 1885.

DEAR SIR,—I have much pleasure in sending you a testimonial as to your make "Favourite" Soda Water Machine, as supplied to my order about 2½ years ago. It has given me every satisfaction, and has always done its work well; has cost nothing for repairs, because none were required. The waters are highly gaseous, and the machine produces goods in the highest state of perfection. Your Dial Pressure Gauge does you great credit, as it does not get out of order. Being an old-established Mineral Water Manufacturer, I offer my opinion with some confidence. You may publish this if you think fit.

Yours truly, T. HICKS.

To Mr. WILCOCKS, Bath.

Aerated Water Works, Howden, Yorks,  
February 10th, 1885.

Mr. N. G. WILCOCKS, Engineer, Back Street, Bath.

DEAR SIR,—I have pleasure in bearing testimony to the excellent workmanship of your machinery. Four years since I had an Aerating Machine and "Eclipse" Bottler, and also a small Engine and Boiler, all of which continue to work to my satisfaction. I may add that, with the exception of the Engine and Boiler, we put the machinery up ourselves. You are at liberty to make what use you like of this.

Yours truly, ROBT. BRIGGS.

Princes End, Tipton, February, 1885.

To Mr. N. G. WILCOCKS, Bath.

From BAYLIS, THOMPSON & CO., Aerated Water Manufacturers.

DEAR SIR,—We have great pleasure in stating that the Aerated Water Machinery you supplied us with two years ago continues to work well, and gives us every satisfaction.

Yours truly, BAYLIS, THOMPSON & CO.

January 24th, 1885.

From COPELAND & TURNER, Portland Mineral Water Works, 9 Upper Market Square, Hanley.

To Mr. WILCOCKS, Bath.

DEAR SIR,—I have much pleasure in testifying to the excellency of the Machinery supplied to us by you. We have now had it in use for two years, and it has given entire satisfaction.

Yours respectfully, COPELAND & TURNER.  
J. COPELAND.

Range Road, Denton, Gravesend, Kent,  
February 5th, 1885.

DEAR SIR,—Having purchased of you a Soda Water Machine and Engine and Boiler, I am happy to say they have given me great satisfaction, and are all I could have desired; they have been greatly approved of by my many friends. You may print this if you please.

Yours respectfully, STEPHEN ALLEN.

Mr. WILCOCKS, Engineer, Bath.

Sonthsea Steam Mineral Water Works,  
Middle Street, January 30th, 1885.

To Mr. WILCOCKS, Bath.

SIR,—Your Turnover Filling Machine is still working admirably, and appears as good now as when I first had it. It is really the best filling machine for quickness and ease of working I ever had.

Yours truly, T. MARTIN.

Holland Street, Brixton, London, S.W.

From ROE & MERCHANT, Aerated Water Manufacturers.

To Mr. WILCOCKS, Engineer, Back Street, Bath.

DEAR SIR,—Your favour to hand. We are pleased to say that the large Double Soda Water Machine that we purchased from you three years ago has been in constant work ever since. It has given us every satisfaction. In fact, we have never had the slightest trouble with it, and it turns out a first-class Aerated Water.

We remain, dear Sir, yours truly, ROE & MERCHANT



# CAUTION.

To ensure the purchase of the genuine celebrated SELTZOGÈNES OF D. FÈVRE, which do not cost more than the imitations, observe on the shoulder of the apparatus the words "VERITABLE SELTZOGÈNE DE FÈVRE," and the Trade Mark signature

Weight of the cases: Cases containing 6 8 pints, about 90 kilos.; 12 5 pints, about 90 kilos.; 12 3 pints, about 60 kilos.

SELTZOGENES CANED & WIRED.

ALL MY GOODS ARE TESTED.

OFFICE—

WORKS—

398 Rue St. Honoré, Paris.

9 Rue Castex (near the Bastille), Paris.

MELBOURNE EXHIBITION—First Order of Merit awarded to Thessier-Fèvre.

Celebrated D. Fèvre Seltzogenes and Powders, for immediate production of Soda Water, Eau de Vichy, Sparkling Lemonade, and Aërated Wines.

D. Fèvre, 398 Rue St. Honoré, Paris, Sole Inventor and Proprietor of the Article and Name "SELTZOGENE." Thessier-Fèvre, Son-in-Law, Manufacturer.

WHOLESALE PRICES.—Celebrated D. Fèvre Seltzogenes.—3 pint, wire covered, 12s. each; 3 pint, cane covered, 12s. 6d. each; 5 pint, wire covered, 18s. each; 5 pint, cane covered, 19s. each; 8 pint, wire covered, 30s. Liberal discount allowed.

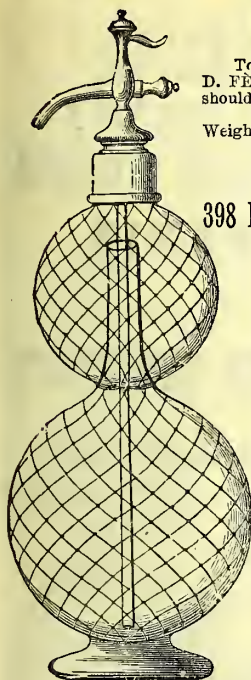
Case and Packing.—12 Seltzogenes, 3-pint size, 4s. net; 12 Seltzogenes, 5-pint size, 5s. 8d. net; 6 Seltzogenes, 8-pint size, 9s. 8d. net.

## CELEBRATED D. FÈVRE POWDERS FOR THE SELTZOGÈNES.

Pure Tartaric Acid and Bicarbonate of Soda in the highest state of perfection.—3 pint, per dozen boxes of 12 charges, 24s.; 5 pint, per dozen boxes of 12 charges, 36s.; 8 pint, per dozen boxes of 12 charges, 60s.; 3 pint, per dozen boxes of 10 charges, 20s. 6d.; 5 pint, per dozen boxes of 10 charges, 30s. 6d.; 8 pint, per dozen boxes of 10 charges, 45s. 2d. Liberal discount allowed.

Extra—Taps, Tubes, Valves, Washers, &c. Direction for Repairs. Drip Catchers, Fittings, Measures, &c.

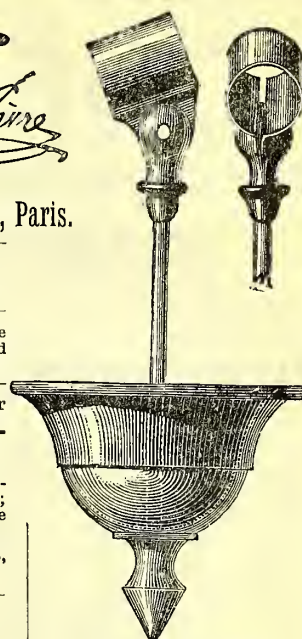
ILLUSTRATED CATALOGUE FORWARDED FREE.



TRADE MARK.



REGISTERED.



D RIP CATCHERS for D. FÈVRE SELTZOGÈNES. 8s. 6d. per dozen.

Registered April 1, 1879, No. 333,951.

THESSIER-FÈVRE, SOLE MANUFACTURER.

## VALLET'S PATENT IMPROVED STOPPERED BOTTLES,

For Mineral Waters and Gaseous Liquids, Are now used by upwards of 1000 Soda Water Manufacturers in the United Kingdom.

PRICES (Per Gross).—Patent Stopper, as per Fig. 1, 4/6; ditto, as Fig. 6, 4/6; ditto, as per Fig. 7, 4/6; Patent Stoppered Bottles, ready for use; ditto Half Bottles, ditto; Patent Unstoppered Bottles; ditto Half Bottles; Fig. 9, Boxwood Bottle Openers, polished, 8/6; ditto, fitted with rubbers, 10/6; Common Wood Bottle Openers, 5/6; ditto, fitted with rubbers, 7/6; Fig. 10, New Bottle Opener, 6/-.  
**ROYALTY FREE.**



Fig. 2.

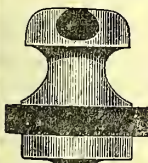


Fig. 6.

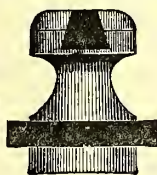


Fig. 1.

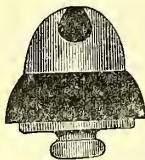


Fig. 7.

It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spilling or removing the indiarubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped is withdrawn from the bottle in a second, without injury to the Stopper.

Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle, when necessary, very often the indiarubber is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubber washer on, and are easily inserted into the Bottle by the simple pressure of the thumb, the washer at the same time folding in the hollow part of the stem, when passing into the Bottle. They are the only Stoppers which require no tool to fit into the Bottle; and when a Bottle breaks, which seldom occurs, the Stoppers are always fitted with washer and ready to be inserted in a new Bottle. Therefore they are the most durable and inexpensive Stoppers in the Trade.

Sample and Particulars sent on application to

L. VALLET, 49 EVERTON RD., LIVERPOOL.

# KRONENQUELLE

CROWN SPRING (Registered).

THE NEW NATURAL MINERAL WATER for the Treatment of DISEASES of the KIDNEYS & BLADDER. SPECIFIC FOR GOUT.

This Natural Lithia Spring, although only recently brought before the Medical Profession has gained a high reputation on account of its quick and decided action even in most obstinate cases. The KRONENQUELLE, although of a nice and palatable taste, is neither a table water nor an aperient. KEEPS WELL IN ANY CLIMATE.

Through all Wholesale and Export Houses, or from the

Sole Consignees: W. SCHACHT & CO., 26 Finsbury Pavement, London, E.C.

CAUTION.—Messrs. W. SCHACHT & CO. beg to inform the Trade generally that all cases are labelled "KRONENQUELLE (Registered)" together with their name and address printed in BLUE INK.



# GUÉRET FRÈRES,

Mechanical Engineers, privileged in France and Abroad,

**72, BOULEVARD DE LA GARE, PARIS.**

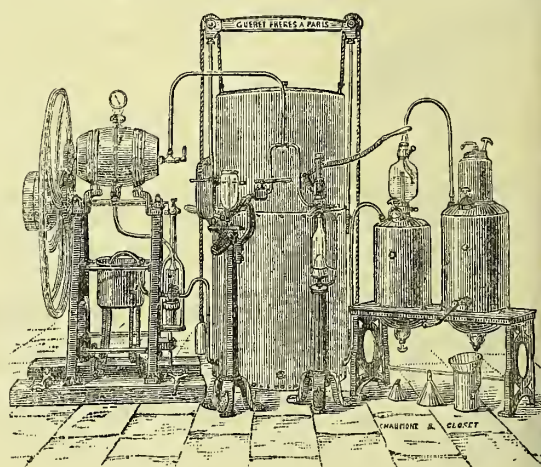
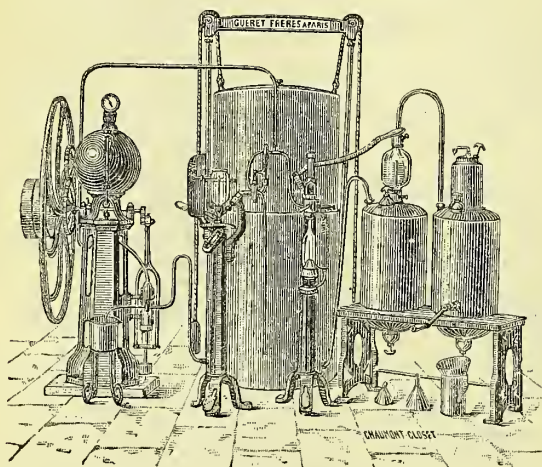
**GOLD MEDAL, AMSTERDAM, 1883.**

## PLANT & SYPHONS FOR THE MANUFACTURE OF AÉRATED BEVERAGES,

WITH ALL THE LATEST IMPROVEMENTS.

### COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.



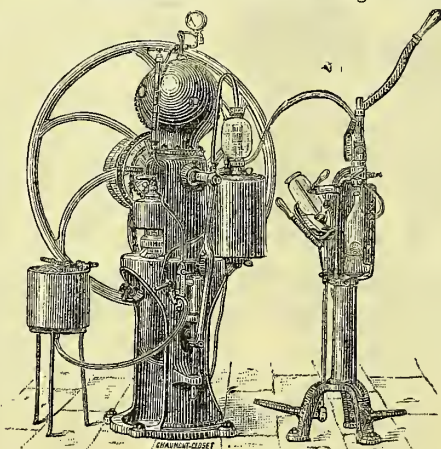
### SYPHONS

With small levers, fittings of metal of highest quality, and best glass.



### CONTINUOUS APPARATUS

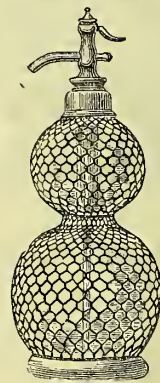
For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



### GAZOSELTZ

For the instantaneous production of Aërated Beverages at table.

Any one can use them.



**FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.**

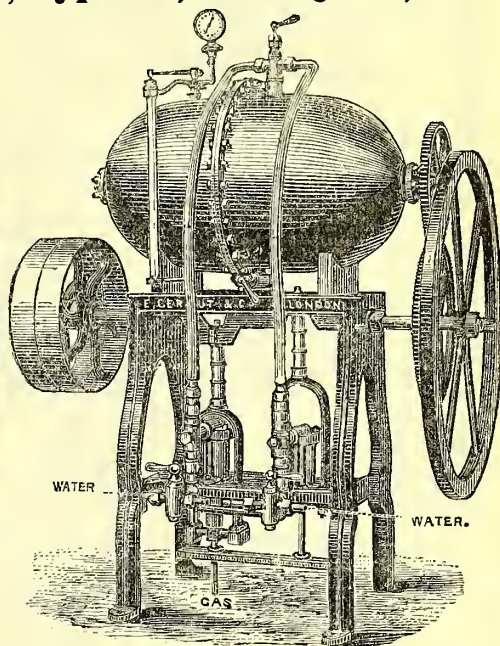
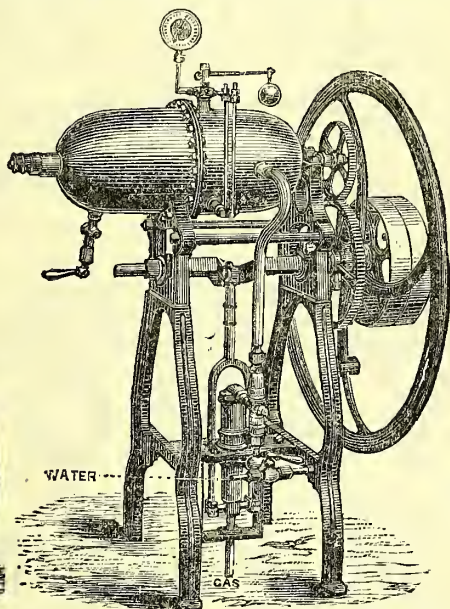
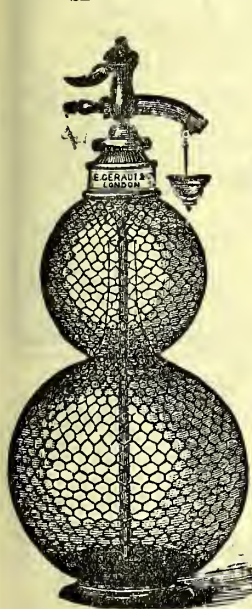


# EUGENE GERAUT & CO.,

PATENTEES AND MANUFACTURERS OF

## Soda-Water Machines, Filling Machines, Syphons, Seltzogenes, &c.

SEND FOR CATALOGUES FOR PARTICULARS AND PRICES.



### IMPROVED PATENT LEVER SELTZOGENES

FIRST INTRODUCED BY EUGENE GERAUT IN 1853,

For the immediate production of Eau de Vichy,  
Soda Water, Sparkling Lemonade, and  
Aërated Waters.

WHOLESALE PRICES AS FOLLOW :

3-Pint Wire ..	13/0	3-Pint Cane ..	13/6
5 " " ..	18/0	5 " " ..	19/0
8 " " ..	30/0	8 " " ..	32/0
3-Pint Size, strongly Silver Plated, richly Decorated, Porcelain Stand	30/0		
5-Pint ditto	ditto ..	38/0	
8-Pint ditto	ditto ..	48/0	

### IMPORTANT NOTICE.

For orders of Three, 15% ; large discount allowed  
off quantities upwards. Strongly Silver-plated  
Top, 5/ extra.

### POWDERS FOR THE ABOVE.

	12 Charges.	10 Charges.
	Per doz.	Per doz.
3-Pint Size, in Handsome Boxes.		
Labelled Boxes ..	21/0	18/6
5-Pint ditto ditto ..	30/0	26/0
8-Pint ditto ditto ..	51/0	44/6

LIBERAL DISCOUNT.

*Illustrated Catalogues on application.*

In ordering our Seltzogenes through firms distinctly state that you require our celebrated name,  
EUGENE GERAUT & Co., marked on the metals.

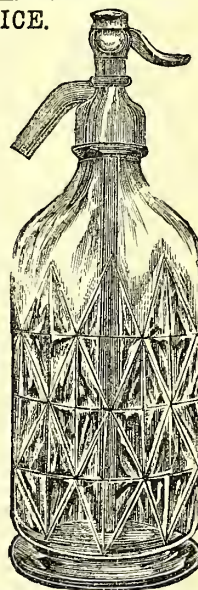
### IMPORTANT NOTICE.



22/6 per dozen.



22/6 per dozen.



22/6 per dozen.

Messrs. E. GERAUT & CO. (the first introducers and manufacturers of Syphons in England 35 years ago) have much pleasure in informing their numerous customers, and the trade generally, that in order to maintain their position as the Premier Manufacturing Firm of Syphons in the World, they have now finished most extensive alterations and additions to their premises, as well as a New and Complete Factory for the manufacture of Glass Vases of the best and purest description. Messrs. E. GERAUT & CO. confidently request their customers, and the public generally, to compare their Syphons with any other make at present in the market, feeling assured that for excellent finish, efficiency, and artistic appearance they are second to none in the trade, and the large and increasing demand of late years experienced fully and authoritatively demonstrates the superiority of their make of Syphons over those manufactured by younger firms in this branch of the trade. Messrs. E. GERAUT & CO. are therefore in a position to undertake orders of the largest magnitude for their justly celebrated Syphons, which are well known at home and abroad for their safety, simplicity and elegance, and they beg to state, to ensure punctuality and despatch, they shall be very happy to book orders in advance, always guaranteeing the best workmanship and materials. The tops are guaranteed to be manufactured of pure block tin, and are most carefully finished, and every syphon, previous to being sent out, is tested at a very high pressure.

WHOLESALE PRICES: Long and Short Levers, Oval, Cylindrical, Octagonal, and Diamond, 22/6 per dozen for quantities of ONE GROSS.  
SAMPLES AND CATALOGUE ON APPLICATION.

OUR ONLY ADDRESS IS—139 & 141 FARRINGTON ROAD, E.C.



# FRATELLI DE PASQUALE & CO.

LARGO MUNIZIONE, MESSINA, SICILY,

MANUFACTURERS, ESTABLISHED ON THE VERY GROWTH PLACE, FOR THE FINEST

## ESSENTIAL OILS

*Of Lemon, Bergamot, Sweet and Bitter Orange. Recently Awarded at the Exhibitions of*

**CALTANISSETTA, 1879**—A Gold Medal and 200 Liras for Invention of Machinery to the use of their Manufactory, and Silver Medal for Excellence of Produce.

**MILAN, 1881**—A Bronze Medal for Excellence of Produce.

**MELBOURNE, 1881**—A First Order of Merit for Excellence of Produce.

**MESSINA, 1882**—A Gold Medal and 150 Liras for an ample set of Machines to the use of their Manufactory, and a Bronze Medal for Excellence of Produce.

*A first trial order is quite sufficient to remain convinced of the Excellence of our Essences.*

Samples and all particulars may be had from our Wholesale Agents—

**SAM'L. LAMBERT & CO., DRUG BROKERS, 132 Fenchurch St., LONDON.**

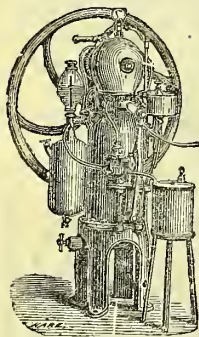
# H. FAVARGER.

GOLD MEDAL]

MONDOLLOT'S PATENT

[PARIS, 1878.

## SODA WATER MACHINERY.



The "MEDIUM"  
The "MEDIUM"  
The "MEDIUM"  
The "MEDIUM"  
The "MEDIUM"  
The "MEDIUM"  
The "MEDIUM"

is guaranted to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c.

requires no skilled labour, and can be worked by hand or steam power.

saves 50 per cent. of materials over any other hand machine, and requires less power.

will last for years without repairs beyond the renewal of washers.

requires no gasometer, and occupies but a quarter of the room of an ordinary machine.

is automatic in all its work, and merely requires the wheel to be turned.

is of the finest workmanship, and is in use all over the world.

*Apply for illustrated Catalogue to*

**H. FAVARGER, 75<sup>C</sup> TURNMILL STREET, LONDON**

# SODA WATER & ICE

## MAKING MACHINERY

AND ALL APPLIANCES FOR THE TRADE

BY

# BARNETT & FOSTER

INVENTORS & MANUFACTURERS

**NIAGARA WORKS, 26<sup>T</sup> EAGLE WHARF ROAD, LONDON, N.**

SEND FOR CATALOGUE — FORWARDED FREE.

The Catalogue above referred to comprises every requirement for the Chemist in the way of Manufacturing and Dispensing of all kinds of Aerated Waters, 3 Gold, 2 Silver, and 2 Bronze Medals, International Health Exhibition, London, 1884.



# IDRIS & COMPANY,

MANUFACTURING CHEMISTS,  
Pure Mineral Water Manufacturers,  
SYPHON AND SELTZOGENE MAKERS.

**BEST GOODS.**

**BEST PRICES.**

Lime Juice Cordial	...	...	...	...	...	7/6 per dozen.	} Reputed Quarts.
Limetta Cordial	...	...	...	...	...	7/6	
Palatable Lime Juice	...	...	...	...	...	9/	
Fruit Cordials	...	...	...	...	...	9/	

(ABOUT THIRTY VARIETIES. LIST FREE.)

**PURE LIME JUICE.**

**PURE LEMON JUICE.**

**NATURAL FRUIT ESSENCES.**

**SOLUBLE ESSENCE OF LEMON.**

**SOLUBLE ESSENCE OF JAMAICA GINGER.**

(THE BEST ARTICLE EVER OFFERED.)

## Sparkling Phosphade

The original preparation containing Hypophosphites as certified by Professor Attfield.

THE MOST AGREEABLE OF ALL THE PHOSPHATIC DRINKS AND THE BEST SELLING ARTICLE.

PATRONISED BY THE PRINCE OF WALES.

The attention of the Country Chemists is specially requested to our goods, as Stores, Grocers, and other cutting shops are not supplied, and Sole Agencies are arranged for small towns.

**IMPROVED SELTZOGENES.**

20 per cent. off usual list prices.

**ELEGANT & DURABLE SYPHONS.**

## IDRIS & CO.

ASCHAM STREET, KENTISH TOWN, LONDON, N.W.



TELEPHONE NO. 7547.

THE

TELEPHONE NO. 7547.

# CHEMISTS' AERATED & MINERAL WATERS ASSOCIATION, LIMITED.

(Incorporated under the Limited Liability Act, whereby the liability of a Shareholder is absolutely limited to the amount paid for his Share or Shares.)

THE ONLY PRIZE MEDAL



LONDON, 1881.

LONDON

45 Gifford Street, N.

BRISTOL

Sun Factory.

HARROGATE

Montpellier Works, Starbeck.

HIGHEST PRIZE MEDAL



BRADFORD, 1882.

THIS Association was started in 1878 to supply *EXCLUSIVELY TO CHEMISTS AND HOSPITALS* manufactured Mineral Waters of the highest class and of specified Formulae (the management of the Association being in the hands of Chemists, Medical men can rely on the fact that the label justly describes the contents of the Bottle or Syphon).

We beg to draw your attention to the great success which has attended the Association during past years. There are now over *One Thousand* Chemists (Shareholders) on the books, and dividends of Four, Five, and Six per Cent. have been paid for the years 1882, 1883, and 1884 respectively.

These facts are significant proofs of the excellence of the Waters manufactured, and of the satisfaction given to our Shareholders and their customers. We therefore feel convinced it would be greatly to our mutual advantage were you to favour us with your trade.

We would also draw your attention to the following important features in connection with the Association:—

1. That none but Chemists (Shareholders) can purchase the Waters direct; consequently, when a Chemist has created a sale, he cannot be undersold by Grocers; whereas, if he purchase from other manufacturers, he will generally find that if he succeed in establishing a ready sale for *any* brand, the *same* waters will soon be found to be offered by Grocers, Wine Merchants, &c., in his locality.
2. That the Waters are acknowledged to be of the first and purest quality, being carefully filtered and passed through silver lined machinery, thereby preventing the possibility of any contamination whatever with injurious metals, which has been fully demonstrated by the fact of the Association having obtained the highest medals whenever they exhibited.
3. That the best Syphons, with toos manufactured from the purest tin, are used; also first-class ordinary Bottles, carefully wired and labelled, and corked with superior corks.
4. That all Natural Mineral Waters and Seltzogenes can be purchased through the Association at cheaper prices than elsewhere.
5. That the Association does not supply the *Trade* generally, but, as stated above, confines its sale *exclusively to Chemists and Hospitals*.
6. The Association can procure for Shareholders any articles connected with the Mineral Water trade, such as Plant, &c, on more advantageous terms than could be obtained by any individual Chemist.
7. One £1 Share entitles the holder (if a Chemist) to all the advantages offered by the Association.

PURVEYORS BY SPECIAL APPOINTMENT  
TO HER MAJESTY THE QUEEN.

## MUMBY'S MINERAL WATERS

Are Perfectly Pure and of First-class Quality.

SODA WATER, POTASS WATER,  
SELTZER WATER, TONIC WATER,  
GINGER ALE, LEMONADE, &c.

### IMPORTANT TESTIMONIAL.

H.M.S. "SERAPIS," Portsmouth, 25th May, 1876.

Messrs. C. MUMBY & Co.,

Gentlemen,—The Soda Water supplied by you for the use of H.R.H. The PRINCE OF WALES on board H.M.S. "Serapis" was of excellent quality, kept in good condition, and gave great satisfaction to His Royal Highness, his suite, and the officers of the ship.

(Signed) THOMAS BRADBIDGE, Paymaster.  
T. W. SCADDAN, Chief Steward.

These Celebrated Waters can be supplied in  
Syphons with Silver-plated Tops.

GOODS CARRIAGE PAID. PRICES ON APPLICATION.

34 THE HARD, PORTSMOUTH.

London Agents:—Walker & Moore, 17 Redcross St.

## TALBOT & CO.'S HIGH-CLASS MINERAL WATERS

OBTAINED THE



HIGHEST  
AWARD  
GREAT  
INTERNATIONAL  
HEALTH  
EXHIBITION  
LONDON  
1884



## GINGER ALE

Unrivalled for fine Aromatic Flavour.

Write for Samples for comparison, which is the most satisfactory way of testing

GOODS SPECIALLY PREPARED FOR EXPORT.

Manufactory: GLOUCESTER.



# SODA-WATER MACHINERY

## SPECIAL NOTICE.

BRATBY & HINCHLIFFE have pleasure in introducing to the TRADE their

# NEW "CHEMISTS" SODA-WATER PLANT.

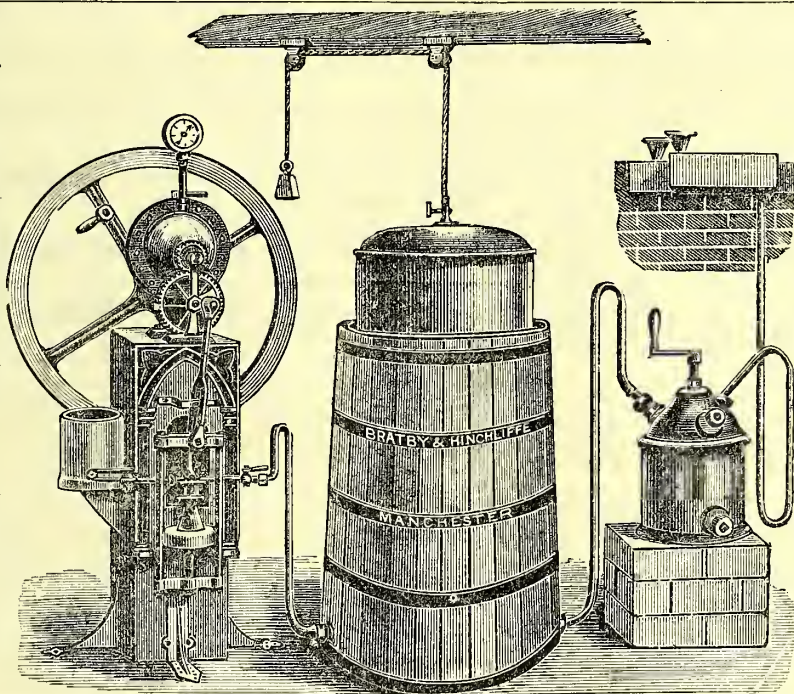
Makes all the popular  
Aërated Beverages.

Can be started at a  
minute's notice.

Suitable for Export.

Cheapest and Best  
Soda-water Plant  
in the Market.

Specially made for  
"Chemists."



Guaranteed to pro-  
duce pure high-class  
Aërated Waters.

Full Instructions to  
Manufacture all kinds  
of Aërated Waters are  
given with each Plant.

Capable of manufac-  
turing 100 doz. full-  
size bottles of Aërated  
Waters per day.

**PRICE: "Chemists'" Soda-water Plant complete, £28.**

Specially designed for Chemists, Hotel-keepers, and Regimental Messes. BOTTLING MACHINES, £8 extra.

## EVERY REQUISITE

FOR AN AERATED WATER MANUFACTORY SUPPLIED.

WRITE FOR ILLUSTRATED CATALOGUE, FORWARDED FREE.

# BRATBY & HINCHLIFFE,

SANDFORD STREET, ANCOATS, MANCHESTER, and  
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# JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

**PURE SODA, SELTZER, POTASH, LITHIA, &c.,  
LEMONADE,  
GINGER ALE, AND QUININE TONIC.**

*Prepared and Bottled specially for Export, and warranted to keep well.*

Manufactured with the utmost care and by improved machinery, these productions are recommended for **purity and excellence of quality** by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the **Lemonade and Ginger Ale** being procured from the **fresh Fruit and Finest Jamaica Ginger**, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The **Soda Water** is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of **Pure Carbonate of Soda**, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The **Seltzer, Potash, and Lithia Waters** are prepared with the utmost exactitude and the purest ingredients.

The **New Quinine Tonic** furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

**Ginger Ale (Aromatic)** of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

*N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.*

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1879.

**JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street MANCHESTER.**

## CANTRELL & COCHRANE'S CELEBRATED AROMATIC GINGER ALE, SPARKLING MONTSERRAT, "CLUB SODA," AND MINERAL WATERS,

As supplied to Her Majesty's Imperial Houses of Parliament,

Have been Awarded **TWENTY-THREE GOLD AND PRIZE MEDALS** at the various International Exhibitions.

*Goods for Export are specially prepared, and are guaranteed to keep in any climate.*

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## LA BOURBOULE,

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (38 millig. of arseniate of soda per litre).

Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Anæmia, Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermittent Fevers. Employed as a drink and in gargles for Bronchitis and Sore Throat, and as a drink and lotion in Ringworm, Chaps, and Redness of the Skin.

Anglican Divine service on Sundays.  
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By Special Appointment to  
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## BOURNE WATERS.

THE PUREST IN ENGLAND.

## R. M. MILLS & CO.,

BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,  
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

*Prices and Pamphlet on application. Agents appointed.*



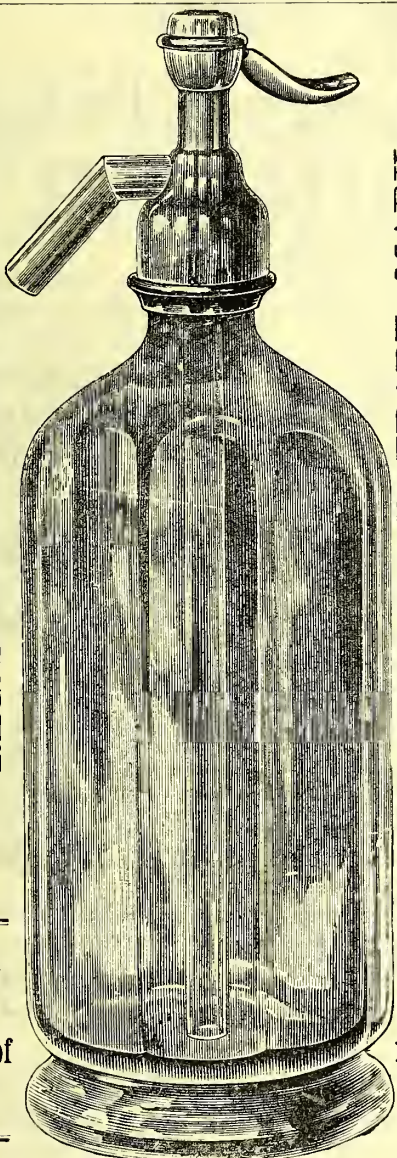
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PATENTEES OF THE

## OCTAGONAL SYPHON.

The "Octagonal" is externally similar to the ordinary Syphon, the interior being blown of an octagonal shape by a new patent process.

REGISTERED TRADE MARK.

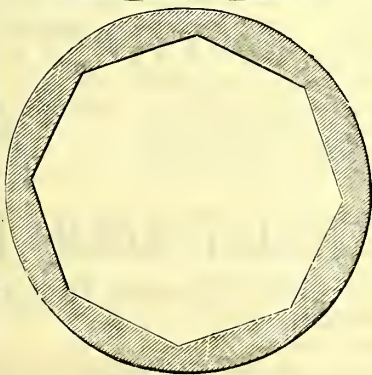


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Gives a most brilliant and sparkling appearance to the contents, and can resist double the pressure of ordinary Vases. Greatly recommend our new tint, "AZURE BLUE," which is the best tint for Syphon Vases.

Sample  
sent on  
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Messrs. BARNETT & FOSTER,  
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And all Mineral Water Engineers.



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# EVANS' SALINE.

## EFFERVESCENT.

This preparation is a mixture, in definite proportions, of Howard's Chlorate of Potash, English Tartaric Acid, Bicarbonate of Soda, and a little Cane Sugar. The proportion of these ingredients is fixed, and always remains the same. This, and the pleasant excess of acid, characterises Evans' Saline. A dry mobile powder, dissolving perfectly.

Bottles with Chemists' own name, or in bulk. For further particulars as to price, &c., see Price List.

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Full Illustrated Catalogue of these attractive specialities, with Chemists' own name and address, in small or large quantities, post free on application.

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56 Hanover Street,  
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LONDON.  
PARIS and MONTREAL.

"The National Table Waters."

"ABSOLUTELY PURE."



REGISTERED.

# ELLIS'S RUTHIN WATERS.

ESTABLISHED 1825.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.  
For Gout: Lithia Water, and Lithia and Potass Water.

ASK FOR ELLIS'S.  
SOLD EVERYWHERE.

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# STOWER'S LIME JUICE SYRUP & CORDIAL

Prepared from their Original Lime Juice Syrup Recipe.

PURE LEMON AND LIME JUICE, SWEETENED  
AND UNSWEETENED.

The advantages offered over other Makers' Cordials are—  
That it contains more Lime Juice.

That it is entirely free from chemical or other acids, except the natural acid in the pure juice of the fruit.

That it is quite FREE FROM THE MUSTY TASTE AND SMELL which predominate in most, if not all, of the Cordials. It is guaranteed to keep, open or closed, for any length of time in any climate or temperature, and to be entirely free from Alcohol.

Any Medical Man can order a Sample Post Free and Gratis.

A. RIDDLE & CO., 38 COMMERCIAL ST., LONDON, E.



**HONOURABLE MENTION,**  
International Food Exhibition, Agricultural Hall, London, October, 1880.

# HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

**Trade Price, 5s. 0d. per lb.; 12 lbs. and upwards, 4s. 6d.**

Highly adapted for the manufacture of *Transparent Aërated Waters*, and for all *Dietetic, Medicinal, and Pharmaceutical* purposes.

Medical and other Opinions on

HAY'S Soluble Essence of Ginger.

"Singularly free from resin."—*The Lancet*.

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"This Essence is of a very delicate and beautiful appearance, the aroma is fine and powerful, and its strength is very great indeed. The flavour is really exquisite, and it concentrates in quite a remarkable degree the very best aromatic qualities of ginger."—*Drinks*, London, Sept. 1, 1884.

Medical Opinions on the Ginger Beer made from HAY'S Soluble Essence.

"An excellent effervescing drink."—*The Lancet*.

"Preferable to some wines we have tasted under the name of champagne."—*Medical Press*.



Medical and other Opinions on  
HAY'S Ginger Champagne.

"An excellent and most agreeable beverage."—*The Lancet*.

"One of the most delicate and wholesome drinks in the market."—*Medical Press*.

"The FINE AROMA OF GINGER which Mr. Hay has caught with remarkable success is an excellent substitute for Alcohol, as it gives what old port wine drinkers used to call 'BODY,' and to many people, besides professed teetotallers, an occasional change at least from the ROYAL FRENCH BEVERAGE to its less costly, but equally sparkling and MORE REFRESHING ENGLISH RIVAL, is a welcome treat."—*The Chemist and Druggist*.

HAY'S Ginger Ale.

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger. It is a beverage which is sure to win favour wherever introduced."—*The Chemist and Druggist*.

## THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the

### FINEST GINGER ALE.

This Essence, which is an addition of Vanilla, Lemon, and other flavours to the above, is strongly recommended for the manufacture of the finest Ginger Beer and Ginger Ale. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour combined with the fullest amount of fragrance and pungency.

**Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. 0d.**

## HAY'S GINGER CHAMPAGNE ESSENCE

FOR THE MANUFACTURE OF GINGER CHAMPAGNE.

This Essence is a combination of the Finest Flavours, and imparts with the Ginger, a most exquisite Aroma.

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HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the Finest Ginger, Lemon, and other flavours in a highly concentrated state. Ginger Beer and Ginger Ale made with this Essence will possess an amount of Aroma, Flavour, and Quality that have hitherto been without precedent, and that will be sure to command a large sale.

THE COST IN MANUFACTURE IS ABOUT ONE FARTHING PER DOZEN BOTTLES.

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SUPPLIES PUNGENCY, AROMA, COLOURING, AND FLAVOURING.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts an unusually Fine Flavour and Great Brilliancy, at a cost of a little under 1d. per dozen bottles.

**Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. 0d.**

PREPARED BY

**W. HAY, Manufacturing Chemist, BEVERLEY ROAD, HULL.**

Agents—Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists,  
5 COLEMAN STREET, LONDON, E.C.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.



# W. J. BUSH & CO.,

MANUFACTURING CHEMISTS,  
DISTILLERS AND IMPORTERS OF

## ESSENTIAL OILS AND FRUIT ESSENCES,

INVENTORS OF

SOLUBLE ESSENCES FOR AERATED WATER  
AND CORDIAL MANUFACTURERS.

## FRENCH CREAM GUM EXTRACT,

PROTECTED BY ROYAL LETTERS PATENT,

*For producing a head of Creamy Richness upon all kinds of Syrups, Aerated Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.*

W. J. BUSH & CO. regret having to Caution the Trade against spurious imitations of this article, most of which are mere rubbish.

## W. J. BUSH & CO.'S

## ENGLISH DRAWN ESSENTIAL OILS.

OL. AMYGD. ESSENT. ANG.

OL. AMYGD. ESSENT. ANG.

*Sine Acid. Prussic.*

OL. ANETHI ANG.

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W. J. BUSH & CO.'S SPECIALITY.

ARTILLERY LANE, BISHOPSGATE, LONDON.



# HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS, FOR THE PRODUCTION OF THE FINEST LEMONADE.

Added in the proportion of one fluid ounce to each gallon of syrup, the soluble essence imparts the most delicious flavour of the Lemon.  
—*The Chemist's Journal.*



The Essence mixes well with water, and has a delicate flavour. The Lemonade made therewith has a far more delicate flavour than that generally met with.  
—*The Chemist and Druggist.*

Trade Price, 8/9 per lb.; 12 lbs. and upwards, 8/3

PREPARED BY

**W. HAY, Manufacturing Chemist,  
BEVERLEY ROAD, HULL.**

# HAY'S GINGER CHAMPAGNE

CAN BE OBTAINED FROM THE SOLE AGENTS,

**INGRAM & ROYLE,**

119 QUEEN VICTORIA STREET, LONDON, E.C.,  
AND BATH BRIDGE, BRISTOL.

Retail Price, in Half Champagne Bottles, 5/6 per doz.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, whilst being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL.

It is strongly recommended both for Juveniles and Adults, &c., as the most Wholesome Stimulating Beverage that has hitherto been introduced, and should be in every household during all seasons of the year.

Samaritan Free Hospital, Lower Seymour Street,  
Portman Square, London, W.

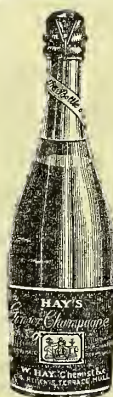
Dear Sir,—I have tried your Ginger Champagne, which I find to be excellent, and I look upon it as a step in the right direction towards meeting a long-felt want. Our Senior Physician, Dr. Henry Savage, has also tried it, and is much pleased with it. We ought long ago to have had such a beverage, and I believe that a great deal of drinking would thus have been prevented. I wish your effort much success.

I am, dear Sir, yours faithfully,  
**GEORGE SCUDAMORE, Secretary.**

An excellent and most agreeable beverage.—*The Lancet.*

Made by Mr. Hay, of Hull, with his well-known SOLUBLE ESSENCE OF JAMAICA GINGER, takes rank as a PURE, WHOLESOME, STIMULATING, and NON-ALCOHOLIC beverage.—*British Medical Journal.*

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# "MONTSERRAT."



## PURE LIME-FRUIT JUICE AND LIME-FRUIT JUICE CORDIALS.

### 400,000 GALLONS!!

EXTRACT FROM THE "LIVERPOOL JOURNAL OF COMMERCE," JUNE 8.

**LARGE IMPORT OF LIME JUICE.**—The *Hilda*, which has just arrived from the Island of Montserrat, brings with her another consignment of Lime Juice, which, with her previous cargoes, makes a total of upwards of 400,000 gallons imported by this vessel. The enormous demand for the article is caused by the fact that this Lime Juice is that supplied with such satisfactory results to our forces in the Soudan and South Africa, and also to the Canadian expedition.

Nothing shows more conclusively than the above fact the superiority of the "MONTSERRAT" LIME-FRUIT JUICE over the many spurious imitations offered under the name of Lime Juice or Lime Juice Cordials.

IT IS NOW TO BE FOUND IN THE STOCK OF NEARLY EVERY CHEMIST THROUGHOUT THE WORLD.  
N.B.—In "Montserrat" alone is the Lime Tree cultivated on a large scale for the production of a Pure Lime-Fruit Juice.

**Sole Consignees—EVANS, SONS & CO., LIVERPOOL.**

London—EVANS, LESCHER & WEBB. Canada—EVANS, SONS & MASON (LIMITED),  
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United States: WRIGHT & RICH, New York, Boston, Baltimore, and Chicago.

(CONSIGNEES' AGENTS.)

AUSTRALASIAN AGENCY—W. J. WATKINS, Wynyard Lane, Sydney, N.S.W.



# Hunyadi János

**CAUTION**—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

## GEORGE OATES & CO., MESSINA, SICILY MANUFACTURERS OF ESSENTIAL OILS.

PRIZE MEDAL, MELBOURNE, 1880.

References: MESSRS. BARING BROS. & CO., LONDON.

# ORANGE WINE.

Most suitable for making Quinine Wine because of its containing the least percentage of tannic acid possible, and being in the most brilliant condition. In casks of not less 8 gallons, 4s. per gallon, carriage paid. Extra superior quality (finest made), 4s. 6d. per gallon, carriage paid.

SAMPLES FREE AND CARRIAGE PAID UPON APPLICATION TO

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## WILLIAM BUSH & CO.,

Manufacturing Chemists,  
ORK STREET, WALWORTH, LONDON, S.E.

ESTABLISHED OVER 40 YEARS.

MAKERS OF

TRATE of MAGNESIA,  
ERCURIALS of every kind,  
WEET SPIRITS of NITRE,  
AL VOLATILE, B.P. & P.L.,  
URE VEGETABLE  
COLOURS of every descrip-  
tion, in Sugar and Paste  
(to this department W. B. &  
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tion, to meet the requirements  
of the trade);  
LACIAL ACETIC ACID,

CONFECTIONERY  
FLAVOURS of every kind,  
and  
FRUIT ESSENCES.  
SUPER ESSENCE of LEMON  
only,  
MINERAL ACIDS of every  
kind,  
TARTARIC, CITRIC, and  
other ACIDS (not makers of  
these, but in a position to offer),  
BORACIC ACID, &c.

SOLE PROPRIETORS OF

**MARIGOLDINE,**  
NEW COLOUR FOR BUTTER, CHEESE, &c.

After a lengthened investigation, the Proprietors are enabled to offer this novel preparation, representing the rich colour of the Marsh Marigold, in a highly concentrated form. Being a Vegetable Extract, it will be found to impart to Butter a beautiful golden colour, free from taste, possessing its natural odour, and as pure as the herbage on which the animal feeds.

It is well known that in the Spring or Summer the rich colour of Butter is derivable from the Marsh Marigold and Ranunculi (Buttercups) of our pastures, and it has been the aim of the Proprietors to produce an article that will enable the dairyman to obtain uniformly the same results at all times of the year in the most agreeable form and it is confidently believed that it will be found superior to every preparation hitherto sold for the purpose. Its perfect compatibility with oil and grease of every description (not watery compounds) makes it useful for many other purposes in which it is desired to obtain a rich and delicate golden tint.

Sold by Chemists, &c., and Wholesale Houses.

W. B. & Co. solicit inquiries, and will be happy to furnish Samples and Prices at all times.



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ESTABLISHED 1873.

*The Pioneer Journal and Representative Organ of the Mineral and Aërated Water Trades.*

PUBLISHED ON THE 18TH OF EACH MONTH.

J. GILBERT SMITH, 143 Queen Victoria St., LONDON.

## ORANGE WINE

(VIN AURANT, P. B.)

Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In casks 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable. Sample, six stamps. Special quotations to large buyers.

## MINERAL WATERS.

Our Mineral Waters are equal to any make. Keep well. Special attention given to Export orders; quotations on application.

SODA WATER,  
SELTZER WATER,  
POTASS WATER,  
LEMONADE,  
GINGER ALE, &c., &c.

1s. PER DOZ. NETT.  
Free on rails, Hertford.  
Send 6/ for a six-dozen case.  
We pay Carriage on a sample case.

**GEO. DURRANT & CO., HERTFORD.**



# BINGLEY'S SUPERIOR GINGER ALE,

AN AROMATIC AND NON-INTOXICATING STIMULANT.

Manufactured by a Special Process worked out by the Proprietor, by means of which the AROMATIC properties and TRUE DELICATE FLAVOUR OF JAMAICA GINGER are fully retained.  
It is confidently offered as a very superior article.

*The following are a few of the opinions which have been expressed in reference to*

## BINGLEY'S GINGER ALE.

:O:

*The Chemist and Druggist of January 15, 1883, says:—"We are bound to report most favourably. Very few makers have succeeded in so perfectly presenting the odour and aroma of Jamaica Ginger in a clear, bright, sparkling beverage."*

*The Midland Medical Miscellany of August, 1883, in a note referring to BINGLEY'S AERATED WATERS, says:—"We are particularly pleased with the Ginger Ale, which, as is not always the case, really presents the flavour of Ginger."*

*The British and Colonial Druggist, May, 1884:—"Mr. JOHN BINGLEY, F.C.S., Northampton, has submitted to us samples of his Ginger Ale, and it is but justice to the maker to state that we have never tasted better."*

*The London Medical Record, December 15, 1884, referring to BINGLEY'S GINGER ALE, states:—"The general excellence of the Ginger Ale as a non-alcoholic drink has been established to the satisfaction of the analyst. . . . BINGLEY'S GINGER ALE contains the true flavour of Jamaica Ginger."*

Extract from a letter dated December 5, 1884, received from a Medical Gentleman in the West Indies, who had sent for a sample:—"Your samples of Ginger Ale came duly to hand. Upon trial I found it to be an excellent article, and as a beverage it will suit this climate of eternal summer, all the year round. It is pleasant, grateful, and tonic; as useful in the sick room as on the dining-table. One of my patients, who had become very fastidious, and could not relish either meat or drink, was persuaded to try one of your bottles of Ginger Ale (iced); after drinking it he smacked his lips, rubbed his chest, and exclaimed, 'That Ginger Ale has just fit my stomach.' He wanted more, but unfortunately I could not supply him. I intend when making my next order to send for . . . cases. I believe it will sell well here."

MANUFACTURED BY

**JOHN BINGLEY, ANALYTICAL CHEMIST, NORTHAMPTON**

*Specially prepared for exportation to warm climates.*

All persons who are interested in such beverages, either for the Home or Export Trades, are earnestly invited to send for samples, which will be supplied GRATIS on application, either direct or through any English merchant.

**C. W. FIELD, MANUFACTURING CHEMIST,**  
SPICE, SEED, & DRUG GRINDER,  
OFFERS:-

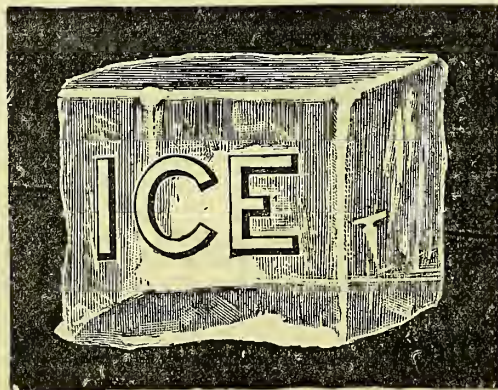
**CAPSICINE  
GINGERINE  
SAPONINE  
OIL OF CLOVES**

**ESSENCES,  
FRUIT  
AND  
ETHERS**

Address—Cambrian Mills, Wood Street, LIVERPOOL.

### FOREIGN MINERAL WATERS.

FREDERICKSHALL	25 Case, 25 bo's; 40' Case, 50 1/2-bo's.
APOLLINARIS WATER,	25/- Hpr., 50 bts.
	39/- Hpr., 100 1/2-bts.
"Carriage paid." Hampers free	
5 per cent. discount if 20 Hampers.	
HUNYADI JANOS (10 Cases, 3/- and 5/- less),	
50/- Case, 25 bts.; 50/- Case, 50 1/2-bts.	
SELTZER	11/- Hpr., 25 bts.
	15/- Hpr., 50 1/2-bts.
PULLNA	18/- Case, 20 bts.
	30/- Case, 50 1/2-bts.
VICHY	11/- " 50 bts.
	17/- " 50 1/2-bts.
CARLSBAD	17/- " 50 bts.
KISSENGEN	42/6 " 50 "
SCHWALLBACH	27/6 " 50 "
HOMBURG	40/- " 50 "
WILDUNGEN	43/- " 50 "
CARLSBAD SALTS, 1/2-Bots., 20/- per doz.	
1/2-Bots., 40/- per doz. Bots., 40/- per doz.	



REGISTERED TRADE MARK.

### NORWAY BLOCK ICE

FROM FINEST LAKES IN  
CHRISTIANIA.

Professor Frankland's report with analysis:—"The Ice is exceedingly pure, and contains less foreign matter than any water with which I am acquainted in this country."

Original Blocks  
(2 to 3 cwt. each) 2s. 0d. per cwt.  
1 cwt. to 2 cwt. .. 2s. 6d. per cwt.  
1/2 cwt. to 1 cwt. .. 1d. per lb.  
Under 1 cwt. .... 1d. per lb.  
Packing free. Utmost promptitude in despatch.

**W. B. HARRISON,**

Importer of Ice and Mineral Waters,

6 BRIDGE ST., SUNDERLAND.



**CASH PRICE**

**20s. for 12½ GALLONS.**

**CASKS FREE.**

School of Cookery, Crystal Palace, S.E.  
January, 1883.

MR. PETER TYRER,

SIR,—I have been using the "Borough" Ketchup, and am very pleased with it. Its flavour is excellent, both for all kinds of savoury dishes and Soups; and I most certainly should advise every cook and housekeeper to use it, FOR I HAVE NEVER YET MET ITS EQUAL.

MARIAN SMITHARD,

*Lectress on Cookery.*

MANUFACTORY—

70 LONG LANE, BOROUGH  
LONDON, S.E.

Scotch Agency—115 West Nile Street, Glasgow.

**DO NOT THROW MONEY AWAY**  
**BUT WRITE**  
**FOR A**  
**FREE SAMPLE OF**  
**SENT FREE**  
**TO ANY ADDRESS**

**Tyrer's**  
**"BOROUGH"**  
**Ketchup**

SILVER MEDAL  
LONDON.

**SEVEN INJUNCTIONS** have been granted during the past few months.

**CAUTION! "YORKSHIRE RELISH."**

NOTICE IS HEREBY GIVEN that in several actions instituted by Messrs. GOODALL, BACKHOUSE & CO., of LEEDS, Injunctions have been recently granted by Judges of the Chancery Division of the High Court of Judicature, restraining several persons from using several Counterfeits of Messrs. GOODALL, BACKHOUSE & Co.'s Labels, and in particular against the use of the words "YORKSHIRE RELISH." The sole and exclusive right to the use of which words having been finally established by the above Firm, they will take immediate proceedings against parties manufacturing or offering for sale Sauce under the above title, not being of the manufacture of Messrs. GOODALL, BACKHOUSE & Co.

Information may be given to the undersigned,

J. SEYMOUR SALAMAN,

12 KING STREET, CHEAPSIDE, LONDON,

*Solicitor to the Trade Mark Protection Society.*

**HARVEY'S SAUCE**

For FISH,  
STEAKS,  
GAME,  
&c.

**CAUTION.**

Each Bottle  
of this celebrated  
Sauce, prepared from  
the Original Recipe, bears  
the well-known Label, signed—

*Elizabeth Lazenby*

This Label is protected by PERPETUAL INJUNCTION in Chancery of the 9th July, 1858, and without it none can be GENUINE.

Prepared only by **E. LAZENBY & SON, LONDON.**

And sold Retail by Grocers, Oilmen, Italian Warehousemen, &c., throughout the Kingdom.

**SPECIAL NOTICE & CAUTION.**

**BRAND & CO.**

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

**NOT REMOVED**

From their **SOLE ADDRESS**, No. 11  
LITTLE STANHOPE STREET, MAY-  
FAIR, W., and caution the trade to

**BEWARE of IMITATIONS.**

**BRAND & CO'S**  
**SPECIALITIES FOR INVALIDS**  
ESTD 1835

ESSENCES OF BEEF,  
MUTTON, VEAL & CHICKEN,  
BEEF TEA, TURTLE SOUP & JELLY,  
MEAT LOZENGES &c.

SOLE ADDRESS  
No. 11,  
LITTLE STANHOPE  
ST.  
MAYFAIR, W.



PREPARED  
**DANDELION**  
 (LEA & PERRINS').

MADE WITH PURE  
**DANDELION ROOT & THE FINEST  
 COFFEE.**

Sold in Tins, at 8d., 1s. 6d., & 3s. each.

**LIVER TONIC**

(GEORGE & WELCH'S).

1s. 1½d., 2s. 9d., and 4s. 6d. per Bottle.

**CARBOLINE (TOOTH PASTE)**

1s. 6d. per Pot.

*Supplied by the Patent Medicine Houses on the  
 usual terms, or the Makers*

**GEORGE & WELCH, WORCESTER.**

**T. & F. J. TAYLOR'S**



**AËRATED WATERS,**  
*Newport Pagnel.*

ESTABLISHED 1835.

**SODA, POTASH, SELTZER, AËRATED** (without  
 Alkali), and **LITHIA WATERS,**  
**LEMONADE AND GINGER ALE.**

*Each Bottle is protected by a Label bearing the Signature  
 of the Firm.*

Purity and Excellence of the Water certified by Analysis  
 by Professor ATTFIELD. Ph.D. F.C.S.

NEW AND IMPORTANT DISCOVERY.

**GINGER ALE**  
 FROM PURE JAMAICA GINGER.

THE ROYAL YORK-  
 SHIRE GINGER ALE,  
 from Pure Jamaica Ginger, is Non-  
 Intoxicating.



ABSOLUTELY PURE.—  
 See Analysis by Drs. J. H. HASSALL,  
 M.D., and OTTO KERNER, F.O.S.

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the  
 same time having a CLEAR and SPARKLING DRINK, has, after much labour  
 and expense, been thoroughly overcome by

**Messrs. HARSTON & CO., of LEEDS.**

EIGHT PRIZE MEDALS AWARDED.

**GOODALL'S  
 HOUSEHOLD SPECIALITIES.**

**Yorkshire Relish**

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and  
 the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is  
 incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s.,  
 and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate  
 and name, GOODALL, BACKHOUSE & CO. No other is genuine.

**Goodall's  
 Baking Powder**

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and  
 beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and  
 5s. Tins.

**Goodall's  
 Quinine Wine**

The best, cheapest, and most agreeable tonic yet introduced. The best  
 remedy known for Indigestion, Loss of Appetite, General Debility, &c.  
 Restores delicate individuals to health and vigour. In Bottles, 1s. and  
 2s. each.

**Goodall's  
 Custard Powder**

For making delicious Custards without Eggs, in less time and at half the  
 price. Unequalled for the purposes intended; will give the utmost satis-  
 faction if the instructions given are implicitly followed. Sold in Boxes  
 6d. and 1s. each.

**Goodall's  
 Blanc Mange Powder**

Is acknowledged by all to be the most convenient and economical pre-  
 paration ever introduced, as, by its use, a most Rich and Delicious Blanc-  
 mange may be produced in a few minutes at a trifling cost, and may be had  
 of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and  
 Vanilla. Sold in Packets, 6d. and 1s. each.

**Goodall's  
 Egg Powder**

Acknowledged to be the only real substitute for eggs yet discovered. Its  
 action on Cakes, Puddings, &c., &c., resembles that of the egg in every  
 particular, enriching them in colour and flavour, rendering them most  
 wholesome and nutritious. One penny packet will go as far as four eggs; and  
 one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

**GOODALL, BACKHOUSE & CO.,**  
**WHITE HORSE STREET, LEEDS.**

*A Monthly Price List of Druggists' Sundries, Patent Medicines, &c.,  
 can be had post free on application.*



**THE GREAT REMEDY FOR PRICKLY HEAT, HEADACHE, BILIOUSNESS, & FEBRILE DYSPEPSIA.**

DRS. PROUT, MORGAN, TURLEY, GIBBON SPARKS, DOWSING, STEVENS, and many other Medical Gentlemen have given unqualified testimony to the importance of the discovery and the great value of

**LAMPLOUGH'S**

It possesses elements most essential to the Restoration and Maintenance of Health with perfect Vigour of Body and Mind.

It is effervescing and tasteless, forming, with water, a most invigorating, vitalising, & refreshing Beverage.

**PYRETIC SALINE.**

Gives instant relief in Headache, Sea or Bilious Sickness, Constipation, Indigestion, Lassitude, Heartburn, and Feverish Colds; prevents and quickly relieves or cures the worst form of Typhus, Scarlet, and other Fevers, smallpox, Measles, Eruptive or Skin Complaints, and various other altered conditions of the Blood. It is the cure for Cholera and Preventive of Dysentery.

Government Officials, Officers, and Planters caring for the welfare of their employes should note its value as a specific in Fevers.

To be obtained of any Chemist or Patent Medicine Dealer, and of H. LAMPLOUGH, 113 Holborn, London, E.C.

First Class Medal, New Zealand, 1882; First Prize Medal, New Zealand, 1883; Cork, 1884.

**PHILLIPS & SONS' DANDELION COFFEE.**

Castle Square, SWANSEA; 34 Eastcheap, LONDON.

Note London Address, having no connection with a Retail Firm of same name. Established 1760.

**FOR INVALIDS & PERSONS OF WEAK DIGESTION.**

**ESSENCE OF BEEF.**  
AND OTHER SPECIALITIES.

IN TINS & GLASS BOTTLES.

Price List on application to the

**LONDON MANUFACTURING CO.,**  
59 to 61, HATTON GARDEN LONDON, E.C.

Ask for **LION SAUCE.**

**DR. KOCHS' MEAT PEPTONES.**

A New really Nutritious and Agreeable Food for Invalids, as well as for all persons in good health.

A solution of the long-sought scientific problem. The nutritious constituents of fresh meat peptonised and retaining the albumen, forming a product of the highest alimentary order, not liable to decompose, agreeable to the taste, invigorating, and instantly assimilable, without requiring the process of digestion. Used with the best results in the Hospitals of London, Paris, Berlin, Vienna, &c. Specially recommended for convalescents, and for sufferers from dyspepsia, poverty of blood, sudden faintness, &c. For further details, see THE LANCET of September 6th, 1884.

Sole Consignees—WIDENMANN, BROICHER & CO., 33 Lime St., London, E.C.

**FRY'S MALTED COCOA**

(PATENTED).

A Combination of FRY'S Pure COCOA EXTRACT with

**ALLEN & HANBURYS' CONCENTRATED EXTRACT OF MALT**

**J. S. FRY & SONS, BRISTOL AND LONDON.**



# "QUISQUIS ES"

IF YOU HAVE NOT YET TRIED AND SOLD

**E. M. EDWARDS & SON'S**

## UNEQUALLED CEYLON TEA

IN LEADEN PACKETS

You have yet to add to your trade considerably. This Tea is grown in the fertile Island of Ceylon. As these Packets are perfectly air-tight, the Tea can be kept in them for a considerable length of time, and yet lose none of its fragrance and aroma. Being mild and invigorating, it is especially suitable for invalids and convalescents.

GUARANTEED TO BE ABSOLUTELY PURE, AND FULL WEIGHT WITHOUT THE PACKAGE.

Choice Ceylon Pekoe Souchong ... 2s. 6d.      Choicest Ceylon Pekoe ... 3s. 0d.  
Superb Small Leaf Orange Pekoe ... 3s. 6d.

Done up in 1-lb. and  $\frac{1}{2}$ -lb. Lead Packets. To be had in Half Chests (60 or 40 lbs.) and Boxes (20 lbs.).

### BLENDED TEAS.

These Teas are selected from the choicest growths of the earliest pickings from the best estates in India, Ceylon, and China.

1/6      1/8      1/10      2/-      2/6 & 3/.

TERMS AND TASTING SAMPLES FREE ON APPLICATION.

## EDWARD M. EDWARDS & SON,

WHOLESALE TEA DEALERS.

35 JEWRY ST., FENCHURCH STREET; Warehouse—LITTLE GEORGE ST., MINORIES,

AGENTS WANTED.]

**LONDON, E.C.**

[AGENTS WANTED.]

### CHEMISTS' TEA AGENCY.

#### WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

#### WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

#### WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

THE

## INDIAN TEA GROWERS CO.,

VIRGINIA BUILDINGS, GLASGOW,

Have for several years supplied FOUR STANDARD QUALITIES of their PURE TEAS—

PACKED in  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1lb. TINS,

Which are very suitable for, and greatly popular with Chemists and Druggists, and Fancy War housemen. The Home Retail Prices, marked in plain figures on each Tin, are 2/4 2 10, 3/2, and 3/6 per lb., or in 5 and 10 lb. tins, 1d. per lb. less.



Terms to Agents may be had on application to A. M. STEWART, Office of The Indian Tea Growers Co., Virginian Buildings, Glasgow.

### KANGRA VALLEY

#### Indian Tea Growers' Association,

11 PANTON ST., HAYMARKET

(Late of NEW COVENTRY STREET, W.).

The distinctive feature of the Business of this Association of Planters is that the Tea is delivered to consumers in the original 1-lb.,  $\frac{1}{2}$ -lb., tinfoiled parcels in which it is packed on the plantations.

THERE ARE THREE QUALITIES:

ORANGE PEKOE, PEKOE, & PEKOE SOUCHONG, Retailing respectively at 4s., 3s., and 2s. 6d.

They were EXHIBITED and INFUSED in the INDIAN TEA SECTION, HEALTH EXHIBITION, and now at the ALBERT PALACE, BATTERSEA.

SPECIAL TERMS TO CHEMISTS.

Agents: Messrs. Barclay & Sons, Farringdon Street; Messrs. John Sanger & Sons, New Oxford Street, W.; Mr. Edwd. Cleaver, 39 Great Portland Street; and Messrs. W. Edwards & Son, 157 Queen Victoria Street, E.C.

### MUSTARD.

#### FINCH, RICKMAN & CO.'S

Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

6 BROKEN WHARF, UPPER THAMES STREET.  
**LONDON.**



# MALTED FOOD

Dr. MILNER FOTHERGILL writes in "HINTS ON DIET"—"While the Malted Food made by T. WALKER is probably *THE BEST*."

6d. Tins	...	...	3s. 6d. per doz. nett
1s. "	...	...	6s. 6d. per doz. nett
2s. 6d. Tins	...	...	17s. 0d. per doz. nett

These can be obtained direct, or through Patent Medicine Houses. *Specify Walker's.*

**LABELS** bear Full Directions, *without any name and address*, but with space for Slip Labels. If 1 gross of 6d. or 1s. size, or  $\frac{1}{2}$  gross 2s. 6d. size, be ordered, well-designed labels will be printed at same quotations with Chemist's own Name and Address; or can be supplied direct without Labels, at 3d. per dozen less.

T. WALKER, Manufacturing Chemist, 44 CLOTH FAIR, LONDON, E.C.

FOR  
INFANTS & INVALIDS.

## IN BULK

40s. per cwt. nett.

This Food is prepared on modern Chemical and Physiological bases.

REQUIRES NO COOKING, and is reliable in every sense.

CONCENTRATED PATENT

## PEPTONISED MILK

AND

## PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

## SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d. Obtainable Everywhere.

## KREOCHYLE

KREOCHYLE IS A PURE LIQUID MEAT, CONTAINING, IN ADDITION TO THE ORDINARY "MEAT EXTRACTIVES," THE WHOLE OF THE SOLUBLE ALBUMEN OF THE MEAT IN A FORM SUCH THAT IT IS ABSOLUTELY SELF-DIGESTIVE.

FOOD AND  
STIMULANT

## BARFF & WIRE

FOR INVALIDS  
AND INFANTS.

PRICES—Retail, 5/ per pint; 2/9 per  $\frac{1}{2}$  pint;  
1/6 per  $\frac{1}{4}$  pint.

HAND-BILLS, SHOW-CARDS, AND SAMPLES SENT WITH  
EVERY ORDER IF DESIRED.

## LIQUID MEAT.

BY ROYAL LETTERS PATENT.

## BARFF BORO-GLYCERIDE

## FOOD PRESERVER.

FOR MEDICAL & SURGICAL PURPOSES.

FOR PARTICULARS CONCERNING KREOCHYLE AND BARFF BORO-GLYCERIDE APPLY TO THE

## KREOCHYLE COMPANY, 9 FARRINGDON ROAD, LONDON, E.C.

TO BE OBTAINED OF ALL WHOLESALE HOUSES.



# HAND BILLS AND SHOW CARDS FREE.

Any Chemist, on application to THOMAS KEATING, Chemist, St. Paul's Churchyard, London, can have these sent for enclosure to his London Wholesale House. The Bills are plain on one side, printed on four different colours, large enough to wrap a 6 oz. bottle. Two or three weeks' notice is required. Please send two labels that printer may add name and address correctly.

## SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES (WITH BEETROOT).

**DOG MEDICINES** for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

**"COMMON SENSE OF DOG DOCTORING,"** price 6d.

**DOG SOAP.**

**LOCURIUM.** Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs; Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast.

Wholesale Terms of **SPRATTS PATENT, LONDON, S.E.,** or your Wholesale House.

## PAPIER-MOURE,

OR FRENCH CHEMICAL FLY PAPER.

Per Thousand Sheets	...	...	...	...	...	...	...	19s. 0d.
Packets containing 5 Sheets (3d.), per dozen	...	...	...	...	...	...	...	1s. 6d.
Packets containing 10 Sheets (6d.),	..	...	...	...	...	...	...	2s. 9d.

SPECIAL QUOTATIONS TO LARGE BUYERS.

## INSECTICIDE-VICAT.

In Bottles	...	...	...	...	...	per dozen,	3s. 4d. and 6s. 9d.
In Bellows Boxes	...	...	...	...	..	3s. 4d.	
In Tin Bellows	...	...	...	...	..	6s. 9d.	

SPECIAL QUOTATIONS TO LARGE BUYERS.

**SOLE WHOLESALE AGENTS:**  
**S. MAW, SON & THOMPSON, LONDON.**



# HORSE, CATTLE, AND SHEEP MEDICINES.



BY ROYAL APPOINTMENT.



## DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE

### "ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Administered for over 50 years by the nobility and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
- "RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.
- "RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.
- "BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.
- "GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest No. 2, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS OF THE BRITISH ISLES.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, 1871; President's Medal, Spalding, 1872; Silver Medal, Manchester and Salford Show, 1874; Silver Medal, Preston, 1875; Silver Medal, Stamford, 1875; Silver Medal, Crewe, 1875; Special Prize, National Agricultural Society of Victoria, Australia, 1875; Medal, Chester, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Newcastle-on-Tyne, 1877; Silver Medal, Knutsford, 1878; Medal, North Berwick, 1878; Medal, Dairy Show, London, 1878; Silver Medal, Derby, 1879; Silver Medal, Wellingborough, 1879; Medal, Benthams, 1880; Medal, Melbourne Exhibition, 1880; Silver Medal, Stourbridge, 1881; Silver Medal, Manchester, 1882; Gold Medal, Christchurch, New Zealand, 1882; Silver Medal, Canterbury, 1882; Silver Medal, Kettering, 1883; and Medal, Amsterdam 1884.

CAUTION.—Beware of Imitations, and see that the name of DAY, SON &amp; HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON &amp; HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

And sold by Messrs. Burgoyne, Burbidges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, Hovenden & Sons, and all Wholesale Druggists, in London: Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

## HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).

THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—

1 oz. pots from	14/- per doz. to	12/6 per doz.	1 lb. pots from	£4 4 0 per doz. to	£4 0 0
2 " "	£1 5 6	£1 3 0	1 " "	7 16 0	7 10 0
4 " "	2 8 0	2 4 0			

Observe the Trade Mark.—"A Horse's Head" on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, BUTLER & CRISPE, 4 Cheapside; NEWBURY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & CO., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and RANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to

JAMES V. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

ESTABLISHED 1833.

## HORSES.—LIEUT. JAMES' BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 52 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Co., 167 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lecher & Evans, Bartholomew Close; Burgoyne, Burbidges & Co., Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall and others and Barclays, Birmingham; R. Hovenden & Sons, 93 & 95 by Road, Finchbury; Sanger & Son, 150 Oxford Street; Millard & Sons, Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Adenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia St., Glasgow; John Thompson, Hanover Street, Liverpool; Boileau & Co., Bride Street, Dublin; Master & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, St. Peter Street, Belfast; D. Galbraith, Londonderry; M. C. Delacoe, armacie Anglaise, Bruxelles. And by all Chemists, in Pots, 1/6, 2/9, 5/6, and 16/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Imwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; ADELAIDE and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Minstree & Co.

H. JAMES, Sole Manufacturer, STANFORD, FARINGDON, BERKS.

22 PRIZE MEDALS AND CERTIFICATES.

## JEYES' "PERFECT PURIFIER."

THE BEST AND CHEAPEST DISINFECTANT, DEODORISER, AND CLEANSER.

Sanctioned by H.M.'s Board of Trade, and H.M.'s Government of India.—Non-Poisonous and Non-Corrosive.

JEYES' SANITARY COMPOUNDS CO., LIMITED, 43 CANNON STREET, LONDON.



An Infallible Cure for Splint, Ring and Sidebone, Spavin, all Bone Enlargements, Sore Shins, &c.

Testimonial (selected) from Mr. John Porter, Kingsclere, February 3, 1885:—

Dear Sir,—Having thoroughly tested your Ossidine for Splints, Spavins, &c., I beg to say that it is the very best remedy I have ever applied. *Paradox, Luminary, and Ptolemy* have all been successfully treated. I shall recommend it to my friends most strongly.

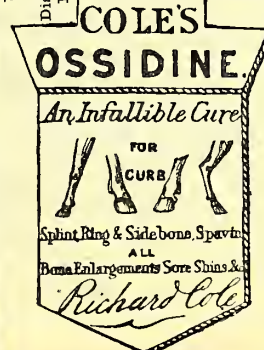
Truly yours, JOHN PORTER.

## OSSIDINE.

Price, 10s. 6d. per Bottle, three for 30s., six for 55s. 6d., sent on receipt of remittance to any address, carriage paid, by J. SWENDEN, for the

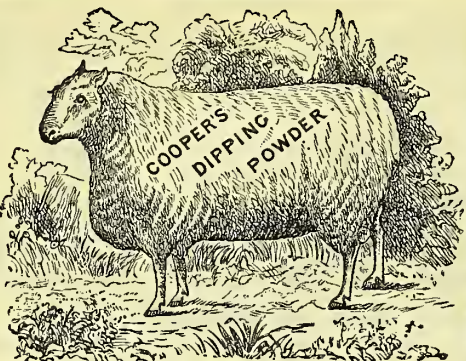
PROPRIETOR, DARLINGTON, CO. DURHAM.

Wholesale Agents—BARCLAY & SONS. And of Chemists and Saddlers.





USED  
ALL OVER THE WORLD UPON



MORE THAN 35,000,000 SHEEP  
ANNUALLY.

## COOPER'S SHEEP DIPPING POWDER,

SOLUBLE IN COLD WATER,  
THE CHEAPEST, SAFEST, AND BEST  
FOR TICKS, FLY, SCAB,  
And for all other Sheep Dipping purposes.

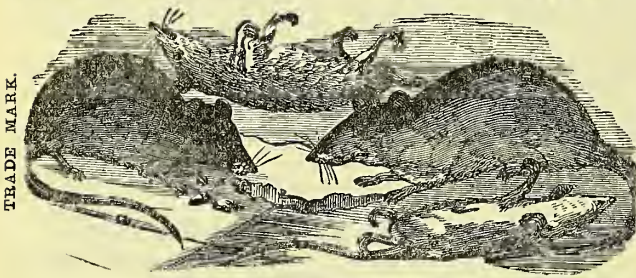
This Dip has been in use for 40 years, and has never been equalled; it is of uniform strength, does not stain the wool, is suitable for all climates, and equally good as a Summer or Winter Dip. It is especially recommended for Dipping Lambs and as a certain Cure for Scab. It is vastly superior to all Carbolic and other Liquid Dips, being so much more reliable and lasting in its effects.

Counter Bills and Directions in English, Spanish, Dutch, &c., may be had free on application.

Terms and all particulars may be had of the Proprietors,

**WILLIAM COOPER & NEPHEWS, M.R.C.V.S.,**  
Chemical Works, Berkhamsted, England.

## BATTLE'S VERMIN KILLER.



TRADE MARK.

TRADE MARK.

{ Mice eat it readily, and  
Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

**TESTIMONIALS.—Thousands might be published.**

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

**Mr. J. R. BATTLE, Chemist, Lincoln, England.**

No Chemist or Storekeeper should be without a supply.

By Appointment to H.R.H.

# BIGG'S

the late Prince Consort.

## SHEEP AND LAMB DIPPING COMPOSITION,

For Destruction of Ticks, Lice, &c., and Prevention of Fly.

HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.

PAMPHLETS ON APPLICATION.

**LEICESTER HOUSE, GREAT DOVER STREET, BOROUGH, LONDON.**

In any Town where no Agent exists Chemists are requested to apply.

WHOLESALE AGENTS FOR CANADA AND UNITED STATES—

**EVANS, SONS & MASON, Limited, Montreal, Canada, and Rouse's Point, New York.**

INDEX TO ADVERTISEMENTS.

See pages 37-38.

## FOUND DEAD

In the house. Thirty-six Mice were found dead by using one packet of SANFORD'S MICE POISON. Mice eat it readily and found dead on the spot. Sold in packets at 3d., 6d., and 1s. each. TRY SANFORD'S CELEBRATED RAT POISON and see its wonderful effect. 210 rats were found dead by one dressing with it by Mr. Ramplly, Manor Farm, Boughton, Hunts.—130 rats were found dead in wheat stacks by Mr. Paine, Caxton. It is, without doubt, the best ever introduced. Price, 6d., 1s., and 2s., of SANFORD & SON, Sandy, Bedfordshire. London Agents—Barclay, Edwards, Sanger, Sutton, and others.

## 100 Rats destroyed for a Shilling by BARBER'S PHOSPHOR PASTE,

WRAPPED NEATLY FOR THE COUNTER.

Handsome, attractive Posters supplied; if conspicuously placed will command constant sale.

Kills Rats, Beetles,  
THE DEAD VERMIN  
DRY UP  
WITHOUT SMELL.



Guaranteed the best  
destroying Paste in  
the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

## BARBER'S VERMIN KILLER,

In 1d., 2d., 3d., 6d., and 1s. Packets. Kills Mice upon the spot.

Testimonial from Her Majesty's Ratcatcher, Hampton, Middlesex,  
May 25, 1870.—

"I have been more than forty years employed at Hampton Court Palace, the Royal Stables, and other buildings in and around the Royal Parks, for the destruction of rats, mice, and other vermin. I have the entire charge of this duty, and after trying all the rat poisons which I have heard of at different times, I now use Barber's Phosphor Paste, and Vermin Killer, with which alone I am able to keep them out of places and national works free from vermin. Signed, CHARLES SHONES."

ASK FOR BARBER'S, AND SEE THAT YOU GET IT.

H. B. FIRMAN, Proprietor.

WORKS, SALISBURY. ESTABLISHED 1838.

Special Quotations to Shippers.

Supplied by all the London Wholesale Houses



# F. DARTON & CO.,

MAKERS TO H.M.'S GOVERNMENT,

45 ST. JOHN STREET, WEST SMITHFIELD.

[Established 1834.]

## Darton's Improved Imperishable Index Clinical Thermometers,

As noticed in the *Lancet*, *Chemist and Druggist*, &c., can be obtained only of the Inventors and Makers; cannot get out of order, and are therefore specially suited for Export.



4-inch or 6-inch, in Ebony or German Silver Case, 4/ each. Fahrenheit or Centigrade scale, Fig. 1.

Do., in Sterling Silver case, 6/ each.

Ordinary Pattern, Contracted Stem, in German Silver case, 4-inch, only 3/ each.

**DARTON'S IMPROVED LENS FRONT IMPERISHABLE INDEX CLINICAL THERMOMETERS**, 4-inch or 6-inch (Fig. 2), 7/ each; if with contracted stem only, 6/ each.

1 Bent and 1 Straight 6-inch Clinical Thermometer in morocco snap case, 9/ the set.

**KEW CERTIFICATES** to any of above, 1/3 each extra. Special quotations for large quantities. Sent safely packed by post on receipt of P.O.O.

**ENAMELLED TUBE BATH THERMOMETERS** in japanned tin case, Silvered Metal Scale (Fig. 3), 15/ per doz.

Do., with Porcelain Scales, 24/ per doz.

**THERMOMETERS FOR TESTING MILK**, 7/ per doz.

Do., Best, with Iron Scales, Mercury Bulb, 16/ per doz.

All kinds of Meteorological Instruments made and repaired for the Trade.

## SPECTACLES.

*Our New Illustrated Price List of Spectacle Folders and Pocket Magnifiers is now in the press, and will be forwarded post free on application.*

For the convenience of Customers who have not yet started the Sale of Spectacles, we fit up Show Cases, containing an assortment of Spectacles, complete with Sight Tester and Instructions, as follows:—



Our £2 2s. **SHOW CASE** for the Counter, in Polished Mahogany, contains 4 dozen Spectacles, Sight Tester, and Instructions for suiting sight.

Our £3 3s. **CASE** contains, in addition, 2 dozen Folders and 2 dozen Cases. Larger sized Cases, in Polished Mahogany or Ebonised, with an assortment of superior quality Spectacles, Folders, and Cases, £6 6s. and £10 10s.

Ditto, with assortment of Best Pebble Spectacles and Folders, £21.

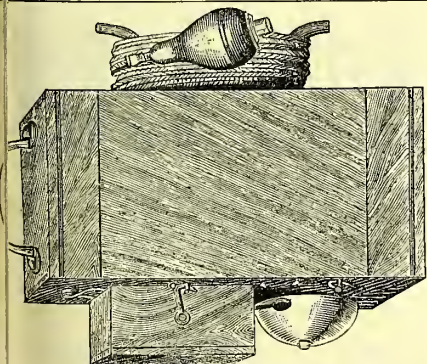
## ELECTRIC BELLS.

**CHEAP ELECTRIC BELL SET**, with Wire Push, Battery, and Instructions, 8/6.

Do., with best mahogany case, Bell, No. 2 Battery, and best line wire, suitable for fixing to shop door, 10/6; if with Metal Push with word "Press" on for out-door use, 12/6.

**INVALID'S BELL SET**, in polished mahogany case, with Twisted Silk Cord, Pear Push, and best Bell (Fig. 6), 16/ each.

ILLUSTRATED LIST OF BELLS, BATTERIES, MEDICAL COILS, MAGNETO-ELECTRIC MACHINES, ETC., ON APPLICATION.



## CARVED OAK FITZROY BAROMETER AS FIG. 7.

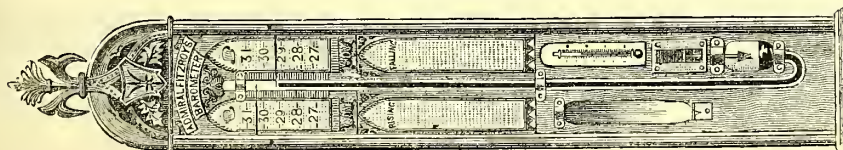


FIG. 7.

With Illuminated and Varnished Scale, fitted with Storm-glass and Thermometer, forming a handsome and useful addition to a chemist's shop, £1 5s.





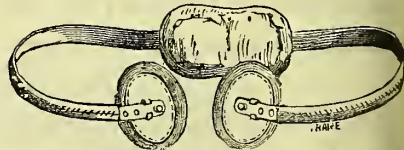
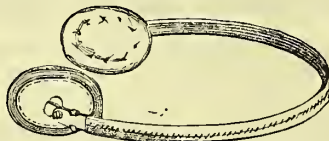
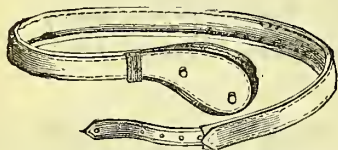
Six doors from Hanway Street.

ESTABLISHED A.D. 1833.



FIRST PRIZE (SILVER MEDAL) FOR TRUSSES AWARDED BY THE  
WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY, 1879

FIG. 5.



### SUSPENSORY BANDAGES—continued.

No.	Description	Unit	Price
6.	Silk Oxonian, superior quality, bands of buff jean, with drawing-strings .. .. .	per doz.	£1 4 0
7.	Silk Bags, to button on, with tape under-straps..	"	1 1 0
8.	" " " under-straps to button	"	1 4 0

**ELASTIC STOCKINGS, KNEE-CAPS, ETC.**

*Manufactured expressly for  
Export, and warranted to stand a  
hot climate better than any others  
in the Market.*

No.	SUSPENSORY BANDAGES.
1. Cotton Bags and tape under-straps .. .. .	per doz. £0 8 0
2. Cotton Oxonian, with drawing-strings .. .. .	" " 10 0
3. Silk Bags and tape under-straps .. .. .	" " 1 0 0
4. Silk Oxonian, with drawing-strings .. .. .	" " 0 18 0
5. Silk Oxonian Bags bound with elastic .. .. .	per doz. 1 4 0

The above may be obtained direct from the Manufacturers, or from their Wholesale and Export Agents  
Messrs. Barclay & Sons, 95 Farringdon Street.

# T. BRADLEY'S

AWARD OF MERIT, INTERNATIONAL EXHIBITION, 1881.

# IMPROVED

# WATERPROOF TRUSSES.

**CAN BE WASHED. ENTIRELY WATERPROOF.**

Children's Truss, Single, per doz. ...	18/0	For Scrotal Hernia, Single, per doz. ...	24/0
"    "    Double,    "    ... ..	26/0	"    "    Double,    "    ... ..	34/0

ADVANTAGES:

They are half the price. They are more durable. They are much softer, and therefore easier to wear than ordinary ones. They are non-irritating, and can be washed and kept clean.

**T. BRADLEY'S INDIARUBBER TRUSSES. BEST QUALITY.**

Children's Single Trusses	...	...	24/0	For Scrotal Hernia, Single	...	...	30/0
„ Double „	...	...	30/0	„ „ Double	...	...	37 0

# IMPROVED GUM ELASTIC TRUSSES

Children's Trusses, Single	...	...	30/0	Children's Trusses, Double	...	...	40/0
----------------------------	-----	-----	------	----------------------------	-----	-----	------

The improvement in Gum Elastic Trusses consists in their being softly Padded, whereas the ordinary ones in Gum Elastic are perfectly hard and solid.

**SPECIAL PRICES FOR LARGE QUANTITIES.**

**T. BRADLEY, 225 GT. DOVER STREET, BOROUGH, S.E.**



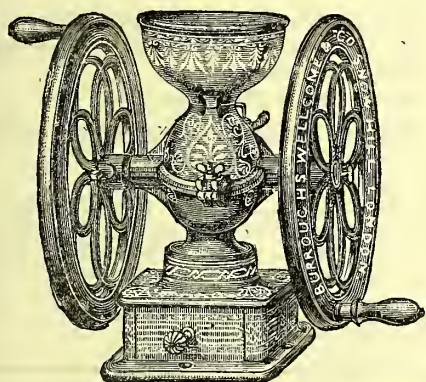
## NEW IMPROVEMENTS.

# THE AMERICAN (ENTERPRISE) DRUG MILL.

CONSTRUCTED ON AN IMPROVED PRINCIPLE.

This is certainly the most perfect machine for grinding  
gigs that has yet been invented, both as regards simplicity  
of parts and efficiency in working.

A great improvement has been effected in this Mill. The  
enders or cutters are now cut to a much keener edge than  
before, thus ensuring a closer contact and reducing the



ings, when it is necessary, to an almost impalpable powder. The general construction has also been improved, rendering it easier to work.

This Mill can be regulated to grind to any degree of fineness or coarseness required, and by the mere turning of a thumb-screw can be opened and the cutters removed in a minute.

The form of the cutters is designed so as to crush and reduce to powder almost any substance, effectually and quickly, at the same time that the cutting edge is never destroyed, thus saving the expense of re-cutting, incident to the ordinary Mill.

The cutters always keep their edge, and never require toothling; if broken they can be replaced at a trifling cost.

In this Mill ALONE there is no danger or loss resulting in grinding any number of different substances in succession, because between each operation the Mill can be stopped, the cutters taken out, cleaned, and replaced with the greatest ease.

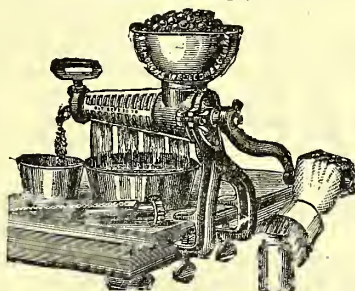
Professor MARCH, Philadelphia Coll. of Pharmacy, U.S.A., says:—"The best Mill that has been devised. One of the prominent advantages is the facility with which the internal working parts can be viewed by simply turning one screw."

The prices are as follows:—Three Sizes (Ornamental), 10s.; £3 10s.; £5 10s.; Three Sizes (Plain), £3; £5. Subject to the usual Discount.

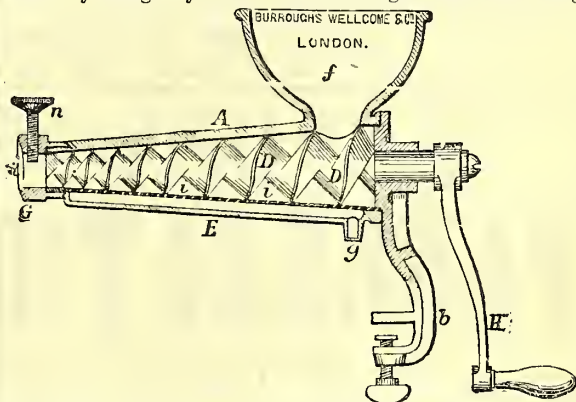
THE  
ENTERPRISE TINCTURE PRESS.

*Specially Adapted for Coarse and Fibrous Drugs.*

The principle upon which the Press operates is, that the drug is acted upon in a continuous thin layer, which is forced forward by each revolution of the screw into smaller and smaller space, the leverage yielding a force so powerful as to extract almost the entire moisture, delivering the residue of suitable drugs with almost crisp dryness, and, as experience has shown, it saves a greater amount of tincture (very important in the case of Tincture of Opium and other expensive drugs) than even the most



powerful hydraulic press. So thorough is its action in this respect, that the *Chemist's Journal* has humorously remarked of it, that "it will almost squeeze blood out of a turnip." One firm informant informs us that they have saved at least £20 more in three months by the use of this Press than they could secure by using any other. The working of this Press being



continuous, either small or very large quantities may be operated upon at one time, and much more rapidly than in any other form of apparatus.

The fact that drugs require handling but once, that the use of press cloths is done away with, and that the operation is continuous, shows a great advantage in this Press over any other.

The *British and Colonial Druggist* says :—"We timed a small press of this kind against one of the old kind, each of about the same capacity; but while only 1½ lbs. of garden rhubarb could at most be pressed, in eight separate operations, in the latter, during a period of an hour and ten minutes, nearly 13 lbs. was effectually squeezed in that time by the "Enterprise," the make in the first instance retaining nearly 17 per cent. (17%) of moisture, and in the second 13 per cent only."

Price 15s. Subject to the usual Discount. Obtainable from every Wholesale Druggist.

The Sole European Agents are BURROUGHS, WELLCOME & Co., Snow Hill, London.



# NEW NORMANDY HONEY.

SEASON 1885.

The quality and appearance of the New Honey is unusually delicate. The price is lower than in any previous year, namely:—  
In 1, 2, 3, and 4 lb. terra-cotta Jars, made specially for us, and which are suitable for the table, 1s. per lb., jars included  
In 50 kilo. original Casks, equal to 1 cwt., 90s. per cwt.

# NEW ENGLISH HONEY, 1885.

The quality is very fine; it is fluid and ready for potting. The price is the same as for Normandy, viz.,  
1s. per lb. in small Jars for retailing, and 10d. per lb. in bulk.

# SOUTHALL'S SAQUARIUM SEA SALT.

The Boxes Retail at 1/1, 1/6, 2/6, and 4/6 each; Wholesale, 9/13, 22/38 per doz. of 13 boxes.  
In each Box is an Earthenware Cup, which holds sufficient for one bath. The Box is lined with waterproof paper.

CIRCULARS SUPPLIED WITH NAMES AND ADDRESSES OF CHEMISTS.

SOUTHALL BROS. & BARCLAY, MANUFACTURING CHEMISTS, BIRMINGHAM

# DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

In Jars, 6d., 1s., and 2s. each.

Can be obtained, in London, through Messrs. BARCLAY and SONS, Farringdon Street; W. EDWARDS and SON, 157 Queen Victoria Street, E.C.; F. NEWBERRY and SON, Newgate Street; S. MAW, SON, and THOMPSON, Aldersgate Street; HAYDEN and CO, 10 Warwick Square, Paternoster Row; HOVENDEN and SONS, City Road; AYRTON and SAUNDERS, Duke Street, Liverpool; GOODALL, BACKHOUSE and CO., Leeds; JNO. HEYWOOD, John Dalton Street, Manchester; JAMES HEMINGTON, 6 Moor Street, Birmingham; HENRY HODDER, Broad Street, Bristol.

BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST." December 15th. 1874.

# SAVORY & MOORE'S PANCREATIC EMULSION,

OR PANCREATISED (PREDIGESTED) FAT,

*Largely Prescribed as an Article of Diet in all cases of CONSUMPTION, WASTING, LOSS OF APPETITE, STRENGTH, AND DIGESTIVE POWER.*

The special advantage of Pancreatic Emulsion is that it provides the NATURAL STABLE SOLID FATS OF FOOD, predigested by the action of the Pancreatic secretion, so that they can be taken without the least disturbance of the digestive functions. As it provides solid fat, it is well to make it alternate with a liquid fat, like Cod Liver Oil, even where the latter agrees; and in many cases where Cod Liver Oil disagrees it may be permanently substituted with the greatest advantage, or it may be taken with the Oil, the assimilation of which it actively promotes.

The Emulsion is of the consistence of Devonshire Cream, easily miscible with fluids, and quite unobjectionable in taste. It may be given in milk or water, and with the addition of a little wine or brandy if desired.

In Bottles, 2s. 6d., 4s. 6d., and 8s.

# SAVORY & MOORE, 143 NEW BOND ST., W.





COLONIAL BUILDINGS, 42 CANNON STREET, LONDON. E.C.

*Published on the 15th of each Month.*

Subscription 10s. per year, payable in advance;  
commencing from any date.

Post free to every country in the world. Single copies, 1s. each.

Supplied only to persons connected with the Trade.

By our clubbing arrangements THE CHEMIST AND DRUGGIST and THE DRUGGIST'S CIRCULAR, of New York, are supplied together for 14s. 6d. per annum through us, or \$3.50 per annum through the office of our New York contemporary.

Post Office Orders to be made payable to EDWARD HALSE, at the General Post Office.

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The new British Pharmacopoeia will, in all probability, be published in the first week of September. We published last month the most complete forecast of its contents which has yet appeared.

We submit on page 441 a scheme for an International Pharmacopoeia, which has been drawn up by a very competent commission expressly for publication in this journal. It is, of course, well known that an international committee has been working for a similar object, and it is now stated that their proposals are ready. Our article was drawn up some months ago when it was not at all certain that anything definite would be put forward officially. We have no thought of offering our scheme in rivalry with that which may or may not be accepted by the International Commission; but we think that its publication may be useful at present now as a contribution towards the discussion which is sure to occur before conclusions are arrived at.

We publish (on page 431) an important article by Dr. de Vrij, in which that eminent cinchologist maintains, against

the assertions of Dr. Paul and other authorities, the practicability of extracting all the alkaloids of cinchona bark by hydrochloric acid. Dr. de Vrij bases his affirmation on "a new and accurate investigation." He gives full instructions for his mode of analysing cinchona bark by hydrochloric acid.

The new telegraph scheme for the United Kingdom is to take effect from October 1. It is satisfactory that the proposal of Lord John Manners to allow free addresses and three words in sixpenny telegrams was rejected in favour of the scheme propounded, though perhaps not originated, by Mr. Shaw Lefevre, that the cheap telegram should consist of twelve words including addresses, and that additional words should cost  $\frac{1}{2}d.$  each.

Bankruptcy proceedings in reference to Colonel Platt, late the proprietor of Godfrey & Cooke's business, and also in reference to R. Cobden Cox, of Brighton, are reported on page 467.

The death of Dr. Landerer, of Athens, a widely-known pharmacist, is reported.

The Minor examination is the subject of further description and criticism by several contributors. With two descriptive articles printed in the last two issues we have now provided a sufficient idea of that examination for the use of future candidates. A personal account of experiences at the Major examination would be welcome to some of our readers.

The sale of arsenic to a person known to the chemist only "by sight," without a witness, has been considered illegal by the Guildford magistrates. Mr. Glaisyer, who defended the chemist on behalf of the Chemists and Druggists' Trade Association, raised the defence that the chemist's assistant, who actually made the sale, was the seller, not the chemist himself. On this the Bench ruled against him, but a case was granted.

A man at Birmingham obtained a pound of arsenic from a firm of drysalers and committed suicide with it. The legal question as to wholesale transactions is likely to be raised in consequence.

Scotch pharmacists have sent to the Privy Council two petitions against the by-laws proposed by the Pharmaceutical Society, basing their objections on the grounds that proper discussion was not allowed at the special meeting, and that one of the proposed by-laws had not been passed in due form.

Several influential pharmacists at Newcastle-on-Tyne have united to establish a school of pharmacy for that locality—including regular courses of lectures on chemistry, botany, pharmacy, and materia medica, and a laboratory course of practical chemistry.

An important Excise trial has just taken place at Edinburgh. The officers had seized 534 gallons of spirit under the suspicion that they contained methylated spirits, and some rather startling evidence as to the sale of methylated spirits to certain dealers was presented. The Somerset House chemists declared that they easily detected methyl in the spirit seized; for the defence Professors Dittmar and Stevenson Macadam declared they could find none. The Court accepted the evidence of the Excise.

The awards of the jury to the exhibitors at the Inventions Exhibition have been published in the *London Gazette*. We give a list of those more or less connected with our trade.



## The Pharmaceutical Council.

THE Council met on August 5. The President being absent, Mr. S. R. Atkins, Vice-President, took the chair, and Mr. Schacht the vice-chair. Messrs. Richardson and Squire were also absent.

### THE REGISTER.

The name of Stephen John Jelley, 51B Cleveland Street, Fitzroy Square, London, was restored to the register, and that of Thomas Uttley, 34 Hampden Street, Salford, was added to the register; both persons having fulfilled the necessary requirements.

### THE INTERNATIONAL PHARMACOPEIA.

In response to an invitation from the President of the International Pharmacopœia Committee, Mr. Carteighe, the President, was appointed a delegate from Great Britain, to take the place of the late Mr. Peter Squire.

### BENEVOLENT FUND.

The Committee recommended three grants of 5*l.* each, and five grants of 10*l.* each. The Committee had also considered the suggestion made by Mr. Bell, of Hull, at the annual meeting, that local secretaries who collect money for the Fund should have votes in proportion, but did not recommend the introduction of such a regulation.

The Vice-President mentioned as one of the reasons for this conclusion that London, which contributes largely, would be left out in this arrangement, as it has no local secretaries.

The Council adopted the recommendations of the Committee.

### THE WRITTEN EXAMINATIONS.

The following list of superintendents and deputy-superintendents for the ensuing year was agreed to; the first named after the town being the superintendent and the second the deputy-superintendent.

Town	Superintendents	Deputy-Superintendents
Aberdeen ..	Strachan, Alexander	Adamson, William S.
Birmingham ..	Southall, Alfred	Churchill, Walter John
Brighton ..	Gwatkin, James Ross	Savage, William Wallace
Bristol ..	Stroud, John	Pitman, John
Cambridge ..	Deck, Arthur	Hoare, William Parker
Canterbury ..	Bing, Edwin	Amos, Daniel
Cardiff ..	Munday, John	Coleman, Alfred
Carlisle ..	Thompson, Andrew	Hallaway, John
Carmarthen ..	Davies, Richard Morgan	Davies, R. Morgan, jnn.
Carnarvon ..	Lloyd, William	Jones, John
Cheltenham ..	Barron, William	Fletcher, John
Darlington ..	Robinson, James	Hutchinson, Rev. E.
Douglas, Isle of Man	Brearey, William A.	Brearey, Arthur W.
Dundee ..	Hardie, James	Kerr, Charles
Edinburgh ..	Stephenson, John B.	Ainslie, William
Exeter ..	Broom, William Willey	Harris, Henry William
Glasgow ..	Kinniamont, Alexander	Davison, Thomas
Guernsey ..	Arnold, Adolphus	Colleetie, Adolphus
Hull ..	Bell, Charles Bains	Baynes, James
Inverness ..	MacRitchie, David	MacRitchie, David, jun.
Jersey ..	Ereant, John, jun.	Ereant, H.
Lancaster ..	Wilcock, John	Vince, James
Leeds ..	Reynolds, Richard	Smeeton, William
Lincoln ..	Maltby, Joseph	Battle, John Scoley
Liverpool ..	Symes, Charles	Parkinson, Richard
London ..	Taylor, George Spratt	Moon, Harry
Manchester ..	Wilkinson, William	Wilkinson, George
Newcastle-on-Tyne	Martin, Nicholas Henry	Stuart, Charles Edward
Northampton ..	Bingley, John	Mayer, William D.
Northwich ..	Sutton, Francis	Corder, Octavius
Nottingham ..	Parker, William Henry	Humphries, Wm. Henry
Oxford ..	Prior, George Thomas	Thurland, Henry
Peterborough ..	Heanley, Marshall	Saunders, James Edwin
Sheffield ..	Ward, William	Wilkinson-Newsholme, G. T.
Shrewsbury ..	Cross, William Gowen	Blunt, Thomas Porter
Southampton ..	Dawson, Oliver Robert	Spearing, James
Truro ..	Percy, Thomas Bickie	Anstey, John Upham
Worcester ..	Virgo, Charles	Lunn, Thomas
York ..	Sowray, Joseph	Wilson, Thomas Wm.

### THE MUSEUM.

The following specimens have been added to the museum:—

False pareira root and genuine sumbul root.

From Mr. H. BUTTERWORTH.

*Clerodendron siphonanthus*, *Microrhynchus sarmentosus*, *Tricosanthes cucumerina*, *Polypodium quercifolium*, *Phyllanthus multiflorus*, *Elaeodendron Roxburghii*, *Cressa cretica*.

From the DIRECTOR, ROYAL GARDENS, Kew.

Root of *Bryonia dioica*.

From Mr. T. W. IRVING, Spalding.

Boracite.

From Mr. D. GREENHOUGH

Chinese peppermint plant.

From Messrs. T. CHRISTY & Co

Five specimens of carbolic acid and eight specimens of sulphocarbulates in crystals.

From Messrs. CALVERT & Co.

### THE PROFESSOR OF PRACTICAL CHEMISTRY.

In reply to a communication from Professor Attfield, the Library, &c., Committee recommended that the endowment of the Chair of Practical Chemistry be 150*l.* per annum.

### THE INAUGURAL ADDRESS TO STUDENTS.

The same committee reported that Professor Dewar, M.A., F.R.S., Jacksonian Professor in the University of Cambridge, and Fullerian Professor in the Royal Institution, had consented to deliver the inaugural address to students in October next.

### PHARMACEUTICAL RESEARCH.

The committee had had a long discussion in regard to the subject of systematic research referred to them by the Council, but had adjourned the consideration of the subject to their next meeting.

All the recommendations of the committee were adopted.

### THE PRIZE EXAMINATIONS.

The examiners for the various prizes offered by the Society had sent in their reports. The results were as follows:—

#### Chemistry and Pharmacy.

Examiner, Professor Redwood.

(Five months' course.) Six competitors.

Bronze medal.. .. Daniel Morris

(Ten months' course.)

Silver medal .. .. Robert Potts

Certificate of honour .. .. Henry Richardson Hoyles

Certificates of merit .. .. Henry Trembath  
Edward Ernest Morrall  
Richard Thomas

#### Botany and Materia Medica.

Examiner, Professor Bentley.

(Five months' course.) Eight Competitors.

Bronze medal.. .. Henry Spencer Cooper

Certificate of merit .. .. Daniel Morris

(Ten months' course.)

Silver medal .. .. Edward Henry Farr

Certificates of honour .. .. George William Francis  
Robert Potts  
Henry Richardson Hoyles  
Thomas Dobb  
Henry Trembath  
Edward Ernest Morrall  
Richard Thomas  
Henry Humphreys

#### Practical Chemistry.

Examiner, Professor Attfield.

Silver medal .. .. Edward Henry Farr

Bronze medals.. .. Edward Ernest Morrall  
Robert Potts

Certificates of honour .. equal { Henry Richardson Hoyles  
Henry Trembath

Certificate of merit .. .. Thomas Dobb



*Herbarium Prize.*

Examiner, Professor Bentley.

Silver medal . . . . Wm. Dunmore, Loveday

Two collections had been sent in, of which the first contained 764 specimens, and was described as of exceptional merit, and quite a model collection.

*Council Examination Prizes.*

Examiners, Messrs. Gilmore and Gibson. Nine candidates.

Pereira medal (silver), and books value 5*l.*, presented by Mr. T. H. Hills.

John Edward Saul.

Pharmaceutical Society's medal (bronze), and books value 2*l.*, presented by

Mr. T. H. Hills.

Edward Henry Farr.

*Peter Squire Prize.*

Examiners, Professor Bentley and Mr. Cordon. Fourteen competitors.

Edward Henry Farr.

*Jacob Bell Memorial Scholarships.*

Examiners, Messrs. Ince and Bowen.

Thirty-two candidates had presented themselves at the following centres:—Birmingham, 1; Canterbury, 1; Edinburgh, 2; Lancaster, 1; Liverpool, 1; London, 20; Manchester, 1; Newcastle, 2; Nottingham, 1; Oxford, 1; Southampton, 1.

The successful candidates were—

William Philip Want and Joseph Grantley Tingle.

## THE HANBURY MEDAL.

The Secretary reported that the adjudicators on the Hanbury Medal had met, and had awarded the medal to Professor Dragendorff, of Dorpat. The Council being trustee of the fund the report was presented to it.

The VICE-PRESIDENT said that the members of the Council would all be gratified to find that so distinguished a Continental chemist had been awarded this medal.

## THE JULY EXAMINATIONS.

The report showed the following results:—

Major (London) . . . .	12 candidates	. .	6 passed
„ (Edinburgh) . . . .	2	„ . .	1 „
Minor (London) . . . .	170	„ . .	56 „
„ (Edinburgh) . . . .	66	„ . .	32 „
Modified (London) . . . .	1	„ . .	0 „
Preliminary . . . . .	366	„ . .	200 „
„ certificates in lieu of examination . .	6	„	„

## TEACHING PRACTICAL PHARMACY.

Mr. SYMES moved the following resolution:—

That the Library, Museum, Laboratory and House Committee be requested to consider and report on the desirability or otherwise of the Society instituting a course of instruction in practical or operative pharmacy.

This had grown out of the discussion last month respecting pharmaceutical research. The Society had a school of pharmacy, but he regretted the fact that there was no practical teaching of operative pharmacy. They had an emeritus professor of pharmacy, but Mr. Dunstan on succeeding Professor Redwood had been appointed professor of chemistry only. In the early days of the Society Dr. Thompson was professor of botany, Dr. Pereira of materia medica, Mr. Fownes of chemistry, and Professor Redwood of pharmacy, so that there was then a distinct professor of pharmacy, which there was not at present. It might be argued that the apprentice should learn pharmacy where he served his apprenticeship; but they knew how much young men who passed their examinations lacked in practical experience of the manufacture of galenical preparations. Establishments where most of the pharmaceutical work was done often do not take apprentices. He would have the students taught the manufacture of extracts and fluid extracts by percolation, and the application of steam to the work. There was not the danger in this respect, which had been pointed out by Mr. Moss, that there was in chemistry, that by giving more knowledge men would seek a livelihood in branches of science more remunerative than that of pharmacy. That might apply to chemistry, because there were outlets for knowledge of chemistry in various ways, but it was not so in the case of pharmacy.

Mr. HAMPSON seconded the motion. He considered practical pharmacy to be in a sense a *résumé* of the other subjects. Young men might have a good chemical knowledge, be able to recognise drugs, and be well versed in botany, but unless they could make their knowledge of practical use, and so produce the ripe product in such a manner as to be of use to the medical man, all their knowledge was comparatively in vain. In other countries this subject was taught. In America in nearly all colleges where pharmacists were educated methods were employed for teaching practical pharmacy; the processes were gone through, proper utensils were used, and apparatus employed, so that the men were made conversant with the best methods in use.

Mr. BOTTLE thought the Council, and not a committee, should decide a question like this.

The VICE-PRESIDENT said it did not follow because the Committee made a report the Council was bound to accept it. He would also remind Mr. Symes that, whilst his extended idea of steam-apparatus and the production of galenical preparations might not at present be realisable in the school, there was a distinct department for teaching pharmacy. For some years past pharmacy had been a recognised portion of the curriculum, under the supervision of Professor Redwood, Mr. Dimmock being his assistant. For the last three years Mr. Ince had been teaching pharmacy efficiently and practically. He had a class of twenty young men, who were supplied with adequate material and appliances for conducting a large amount of purely pharmaceutical work.

Mr. WILLIAMS thought this was an attempt to do more than could be done effectually without very great expense, because if the Society attempted to do the work proposed it ought to do it very perfectly; the apparatus should all be model apparatus, and everything on a first-rate scale. A large portion of the present teaching power would have to be turned out to make room for this new scheme of teaching practical pharmacy, if it were to be done efficiently. He thought it was a mistake when materia medica was combined with botany, and practical pharmacy with scientific chemistry. He wished the Council could see its way to restore those separate chairs. But that was a very different thing from establishing a large laboratory with steam plant and apparatus of a model character; it was such a very serious matter that he did not think it would be a judicious outlay of the Society's funds.

Mr. SCHACHT inclined to adhere to the opinion that a youth educated in a practical laboratory was infinitely better qualified than one who had gained a larger amount of theoretical knowledge, and with it some practical knowledge, in a class. But he had just enough doubt on the matter to enable him to vote for this motion, for he should decidedly like the subject referred to and discussed by a Committee.

Mr. Young supported the motion.

Mr. SYMES, in reply, alluded to the question of expense and room which had been raised. He did not object to the judicious expenditure of money by the Society, but when the Society was expending 200*l.* a year on the *conversazione*, and hundreds on other matters which were perfectly legitimate, it was about the last argument which should be brought forward that the money could not be spared for teaching the very vital portion of the work which young men were called on practically to perform on going practically into business. When a young man took up an extract he should know how it was made, and all about it. If he was in that position, he would be better able to deal with it, and would know what he was doing when dispensing a prescription.

The motion was then agreed to *nem. con.*

## THE AMENDED BY-LAWS.

Mr. SCHACHT moved—

That a Committee be appointed to consider and report upon any further action it may think the Council should take in connection with the changes indicated in the amended by-laws.

His object was to be ready to give effect to the new by-laws as soon as they should be sanctioned by the Privy Council.

The general opinion appeared to be that it would be better to wait till the decision of the Privy Council was known; consequently Mr. Schacht withdrew his motion.

It was agreed that only a formal meeting of the Council should be held in September.



## Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on August 5, the President (Mr. J. E. Brunker, M.A.) in the chair. There were also present the Vice-President (Mr. H. Draper), Sir George Owens, Professor Tichborne, Dr. Montgomery, and Messrs. Hayes, Evans, Grindley, and Wells.

A letter was read from the Registrar of the Pharmacy Board of Victoria acknowledging receipt of the Calendar of the Pharmaceutical Society for 1885.

A letter was read from Sir R. G. C. Hamilton, K.C.B., dated Dublin Castle, July 8, acknowledging the receipt of a further letter from the Society of July 2 on the subject of the appointment of a visitor to be present at the Society's examinations, and requesting information as to where and how often in the year the examinations were held.

A letter, dated July 18, which the registrar had been directed by the President to send in reply to the above, was read, giving the required information.

The PRESIDENT stated that he had received two communications from Brussels in connection with the International Pharmaceutical Congress to be held there. The first was of a general character as to the appointment of delegates. These the Council had already appointed. The other requested the Society to nominate two delegates to act upon the committee to consider the question of a Universal Pharmacopœia, which was to make a report to the Congress at Brussels. The committee were to assemble on August 28 or 29, before the meeting of the Congress. In point of fact Professor Tichborne and Mr. Draper had been appointed delegates to that committee so long ago as October 5, 1881, and had sent in their reports as members of the committee.

In connection with a correspondence which was read on the subject of a prosecution pending for alleged illegal compounding,

The PRESIDENT remarked that these prosecutions, where undertaken by the Society, had been a source of great expense to its funds, even when quite successful. Licentiate often complained that the Council did not prosecute often enough and with sufficient vigour in cases of the sort; and yet they would not pay a guinea each and become members of the Society. The result was that the Society had not sufficient means to undertake a prosecution in every case.

Messrs. Wells, Payne, and Allen were named delegates to the next meeting of the British Pharmaceutical Conference.

The PRESIDENT called attention to the reports of the examiners as to the results of the Preliminary examination and the Final examination for the licence, held in July. At the Preliminary examination nine candidates presented themselves, of whom seven passed. There were ten candidates for the licence, of whom eight passed.

The following were the candidates who passed for the licence:—Richard Allen, 233; William K. Young, 218; John Nugent Harris, 205; Thos. J. English, 202; Alfred J. Pilson, 201; J. Brownlow Hay, 197; David Anderson, 187; Alfred J. A. Lennan, 174.

Some financial business having been disposed of, the Council adjourned.

**HARMLESS SOLDERING MIXTURE** (*Chem. News*, 51, 147).—When soldering the tins in canning provisions, it is proposed to substitute for the noxious zinc chloride a harmless mixture of 1 part lactic acid, 1 part glycerol, and 8 parts of water. This mixture is patented and is in use.

**SILVERING OF GLASS.** By Böttger (*Chem. Centr.*).—The silvering liquid employed is made by dissolving 4 grammes of pulverised silver nitrate in strong ammonia, adding 1 gramme ammonium sulphate and 350 c.c. water. A solution of 1·2 gramme starch or grape sugar with 3 grammes caustic potash in 350 c.c. of distilled water forms the reducing liquid. When used, equal volumes of the two liquids are mixed together and applied to the surface of the substance to be coated.—*Journal of Chemical Society.*

## Metropolitan Reports.

### CRICKET MATCHES.

PLAYED at the Recreation Ground, Harrow, on July 25, 1885, between Messrs. Burgoyne & Burbridges' C.C. and Messrs. Baiss Brothers' C.C.

#### Burgoyne & Burbridges' C.C.

Mr. Bew, st S. C. Welch ..	19
Mr. Tate, c Still, b S. C. Welch ..	17
Mr. Fenimore, c Still, b S. C. Welch ..	20
Mr. Troughton, b S. C. Welch ..	6
Mr. Farrell, b Still ..	7
Mr. Wickham, c Welch, b Still ..	11
Mr. Kallender, b w. b Welch ..	0
Mr. Harwood, b S. C. Welch ..	0
Mr. Ibbs, b S. C. Welch ..	3
Mr. Taylor, b S. C. Welch ..	1
Mr. Stocker, not out ..	0
Extras .. ..	12
96	

#### Baiss Brothers' C.C.

Mr. West, b Kallender ..	37
Mr. Still, st Bew, b Tate ..	5
Mr. Cumberland, b Tate ..	5
Mr. Merrill, b Fenimore ..	3
Mr. Welch, b Fenimore ..	3
Mr. Peckover, c Substitute, b Fenimore ..	2
Mr. Tilley, c Bew, b Kallender ..	1
Mr. Holley, b Fenimore ..	0
Mr. Dear, not out ..	11
Mr. Goodall, not out ..	0
Mr. Elwin, not out, to bat ..	0
Extras .. ..	5
72	

The rival teams had supper together at the Railway Hotel after the play.

PHARMACEUTICAL V. MAURICE. — Played on Saturday, July 25, at the Eton and Middlesex Cricket Ground, and resulted in a victory for the "Ceuticals" by 57 runs.

#### Pharmaceutical.

Potts, b Plowman ..	4
Proudman, b Kendarline ..	14
D. Jones, b Kendarline ..	26
Aston, b Kendarline ..	0
Mowatt, c Gould, b Terry ..	7
Lucas, b Terry ..	32
Phillips, b Gould ..	4
G. E. Jones, c Grosvenor, b Terry ..	3
Topholme, b Terry ..	3
Searle, b Terry ..	0
Catteral, not out ..	0
Extras .. ..	10
103	

#### Maurice.

Kendarline, b Lucas ..	21
Grosvenor, b Proudman ..	0
Terry, b Lucas ..	8
Plowman, b Lucas ..	0
Webb, b Proudman ..	0
Gould, b Proudman ..	0
Bartlett, b Lucas ..	0
Henschall, b Proudman ..	0
Mandell, b Lucas ..	3
Debenham, b Lucas ..	7
Roberts, not out ..	0
Extras .. ..	7
46	

## Provincial Reports.

### BIRMINGHAM.

#### Notes written for THE CHEMIST AND DRUGGIST.

WE hear that Messrs. Lewis contemplate quite a novel project for establishing what our American friends would call a "boom" previous to opening their magnificent premises, which are expected to be transferred from the builders' hands at the close of this month. What with the "stores" and cutting establishments which are, and those about to be, started in Birmingham, general retail traders of the town are threatened with effacement altogether. These are certainly days of cruel competition, and the less money there is about the greater is the struggle of "enterprising speculators" to lay hold of it.

The dispensary at the Skin and Lock Hospital here requires the services of a "young lady dispenser," exceptional opportunities being offered to those wishing to pass the Pharmaceutical examinations. Lady aspirants to future high-class "art" should at once apply.

A chemist here recently had a customer for a pennyworth of "oil of cloves" for toothache. As she had brought nothing to put the liquid in he sent her back for a bottle. She speedily returned and informed the chemist that, as she had not a bottle, she had brought a kitchen saucepan. What sort of an idea the woman had of "oil of cloves" did not transpire.

COMPETITION.—The well-known penny camphor lockets, which had so enormous a sale when first introduced to the general public a few months ago, can now be purchased retail at the modest sum of ½d. each.

Mr. Blythe has purchased the business lately carried on by Mr. Thomas Gilman, jun., 78 Lichfield Road. Mr. Blythe was formerly manager to Mr. Gilman.



It was, as everybody knows, extremely hot on Sunday, July 26, and in New Street of this town the thermometer registered 100° in the shade. It was slightly warmer, though, the following Monday, in a certain chemist's shop, when it was discovered that a careless assistant had actually sold  $\frac{1}{4}$  lb. of "arsenic," instead of the same quantity of "arrowroot." There were lively times afterwards, but, fortunately, the efforts of the shopman and others were successful in finding the purchaser before the death-dealing compound had been unwrapped.

The National Veterinary Association held their third general meeting at the Medical Institute, New Edmund Street, Birmingham, on August 4 and 5. In an adjoining room Messrs. Arnold & Sons and Krohne & Sesemann had a splendid display of veterinary surgical instruments; while drugs were shown by Messrs. Burgess, Willows & Francis, Corbyn, Stacey & Co., Mackey, Mackey & Co., Hewlett & Sons, of London; together with Messrs. P. Harris & Co. and Southall Brothers & Barclay, of Birmingham, and Wyleys & Co., of Coventry.

Messrs. J. H. Blunt & Son, chemists and wholesale herbalists, 71 Snow Hill, requiring more room for their increasing business, have removed to larger and more commodious premises adjoining their old address.

Mr. Robert Darwin, a commercial traveller, of Manchester, who was staying at Bullivant's Hotel, Birmingham, on July 24, did not get up all day, but had three or four brandies and sodas" in bed. In the afternoon he rang for the "boots," whom he sent to Mr. Hedges, chemist, Dale End, with a prescription, which the man obtained for him. It was for a liniment, and contained a large quantity of opium. The bottle was labelled—"The liniment. Poison. Beware! Not to be taken." Deceased took the whole of it, and died at nine o'clock the same night. A coroner's jury next day returned a verdict of "Death by misadventure."

On July 13 a married woman, named Emma Clumpley, was admitted to the Queen's Hospital, having attempted to commit suicide by taking a quantity of prussic acid. She was saved with great difficulty.

#### ARSENIC BY THE POUND.

On August 4 Thomas Tobin, a carpenter, who had bought some arsenic, was found very ill from the effects of the poison, which he admitted having taken. A police officer took him in a cab to the general hospital, where antidotes were administered, but unsuccessfully. At the inquest it appeared that the man had lost some money over horse-racing, and had subsequently been drinking a good deal. The evidence at the inquest respecting the purchase of the poison is important:—

James Brown, 168 Hockley Hill, chemist, said about three o'clock on Tuesday afternoon deceased came to his shop and asked for threepennyworth of arsenic. Witness told him he could not sell it without a witness. Deceased went out and came back in ten minutes and showed him a parcel and said, "You need not have made such a fuss about it. I have got it from over the road." Deceased afterwards said, "I don't mind telling you. I have had a great trouble at home, and I am going to take a dose." Witness kept him talking at the door in the hope of seeing a policeman, and as he did not see one he took hold of him by the collar to detain him. Deceased broke away and hurried off. Witness took his hat and followed him, but could not find him. He then went and told deceased's wife, and also reported the matter to Detective Barratt.

Charles Wilkins, assistant, in the employ of Messrs. Tubbs & Wilkins, chemists and drysalts, Key Hill, said he knew Tobin as a casual customer. He had seen him pass by the shop, and his face was familiar to him. He could not say whether he had ever served him. He came into the shop about half-past three on Tuesday afternoon and asked for  $\frac{1}{4}$  lb. of arsenic for manufacturing purposes. Witness told him he could not supply him, but deceased said he used arsenic regularly in his business, and had a labelled bottle at home to keep it in. Witness told him he did not know him efficiently, and could not supply him. Deceased replied that he worked at a jewel-case maker's in Hylton Street, and witness told him if he wanted the arsenic he must get

an order for it. He went away and came back in about five minutes with a man named Hatton. Hatton said, "You can let him have this arsenic." Witness had known Hatton for five years, and had dealt with him for cyanide of potassium, muriatic acid, and other poisons used by jewellers. Witness let deceased have 1 lb. of arsenic and charged him 3d. for it. He put a label, "Arsenic—poison," on it. Deceased did not say that he wanted the arsenic to retail it.

The Deputy Coroner: Do you hold yourselves liable to conform to the provisions of the Poisons Act—Yes; but I thought that in dealing wholesale we did conform to it by knowing the persons whom we were supplying. Besides, I knew Hatton, too.

Don't you know that if you deal wholesale it must be by written order?—I did not know it was necessary if we knew the party who was applying for it.

You say this man did not say he wanted it for retail purposes. He wanted it for manufacturing purposes. Do you suppose you are at liberty to sell poison for manufacturing purposes?—Yes, to any one we know.

Did you make any entry in the register?—No, I did not think it was necessary.

In reply to further questions witness said he sold the arsenic in its natural condition. He did not mix it with any ingredients. He did not enter the name of the purchaser or that of the witness. Deceased seemed quite rational and calm when making the purchase.

Samuel Hatton, the man who accompanied the deceased, said he had known him for a long time. He met Tobin near the chemist's shop, and he told him he wanted the arsenic to do some gilt work with and the chemist would not let him have it. He asked witness to go and help him to get it. Witness did so, and told the assistant he might let Tobin have the stuff. He was never more surprised in his life when he heard Tobin had poisoned himself. He knew Tobin used poison occasionally with his work.

The Coroner, in summing up, referred to the fact of the ready means that deceased found at Messrs. Tubbs & Wilkins in obtaining such a large quantity of poison as they heard he had obtained. The firm who sold this poison would contend that they did not come within the rules of an ordinary chemist under the Poisons Act in dealing with it, but under the rules as drysalts dealing in a wholesale manner. It would be very interesting in the interests of justice for the case to be decided whether the obtaining of poisons for manufacturing purposes came within the meaning of the Act. The case, however, would probably be dealt with elsewhere.

The jury returned a verdict of "Suicide while in a state of temporary insanity." The foreman of the jury called attention to the loose way in which Messrs. Tubbs & Wilkins retailed such large quantities of poisons without taking note or other precaution. They also commended Mr. Brown for the caution he exercised in the case.

It is not generally known that the now noted author of "John Inglesant" and "The Little Schoolmaster Mark" is a Birmingham man, and engaged in the chemical trade. Mr. Joseph Henry Shorthouse carries on at the present day, and in the identical premises, the business established by his great-grandfather more than a century ago, as a manufacturer of chemical acids, in New Market Street of this town.

Mr. E. Arblaster, M.A., of Clare College, Cambridge, and son of Mr. C. J. Arblaster, chemist and soda-water manufacturer, 123 New Street and 13 Hagley Road, Edgbaston, has been elected by the governors to the post of head master of Carlisle Grammar School.

We are informed that "imitation" boxes of Whelpton's pills (the 2s. 9d. size, both purifying and stomach) are being sold wholesale to hucksters and small shopkeepers in this town, and are retailed by them to their customers as "genuine" Whelpton's.

There are at the present time some exceptional opportunities for young men who intend starting business on their own account to purchase a shop in Birmingham, several unusually good ones being in the market, some of them at which fortunes have been realised.

At the Birmingham County Court on August 4, *in re* Henry Whittles, of 316 Wheeler Street, chemist and druggist,



debts 813%, assets 503%, a scheme of composition of 7s. 6d. in the pound was approved of.

**CARBOLIC-ACID POISONING.**—On July 25 a number of brakes took a pleasure party from Birmingham to Knowle. On reaching their destination the drivers of the brakes put their horses in the stable and prepared to feed them. A large bottle of beer was brought into the stable, and one of the men suggested that it should not be touched until the horses had been seen to and they were at liberty to enjoy themselves. The beer was accordingly hidden, but shortly after one of the drivers, named Peadle, entered the stable and asked for a drink of the beer. He was told of the arrangement, but replied that he "should do no work till he had had some beer." Thereupon he went in search of the bottle, and in a few minutes came across a large stone bottle, which he at once uncorked and drank from. Another man ran up to Peadle, and snatching the bottle from him, also drank eagerly. As the second man was drinking Peadle fell down unconscious and died soon afterwards. The other man, in great agony, was conveyed with all speed to the Queen's Hospital, Birmingham, where it was found he was suffering from poisoning by carbolic acid. Remedies were at once applied, fortunately with success, and he was able to leave the hospital after treatment.

At the Birmingham Assizes on August 13 Samuel William Bradbury, formerly a manufacturer of sheep-dipping powder, Llandoverly, sued Herbert H. Cooper, manufacturer of sheep-dipping powder, Berkhamstead, to recover the sum of 15,000% damages alleged to have been sustained by the plaintiff in his credit and reputation, and also to his trade, by reason of letters published by the defendant in which false statements were maliciously made about the plaintiff. After partially hearing the case the Judge and jury came to the conclusion that it was substantially the same case as the one which plaintiff had previously brought against one of defendant's travellers, and in which a juror had been withdrawn. Consequently, a verdict was returned for the defendant, the Judge remarking that it was a breach of faith to bring this action.

The adjourned inquest on the body of Frank Smith Brittain (25), medical assistant, who was found dead in a field at Yardley on Sunday, July 26, was resumed on August 4 before Mr. Docker, district coroner. Deceased was a son of Mr. Brittain, coachbuilder, Birmingham. Mr. A. Robinson, analytical chemist to Philip Harris & Co., Bull Ring, stated he had examined the contents of the stomach, but had found no trace of either mineral or vegetable poison. Dr. Roston, recalled, said that after the chemical analysis he was not prepared to say that he believed the cause of death to be asphyxia, which in the absence of any signs of violence was probably due to natural causes. The jury returned a verdict of "Death from natural causes."

#### BRIGHTON.

**ANNULLING A BANKRUPTCY.**—At the local Bankruptcy Court, on July 30, the application was renewed for an order annulling the bankruptcy of John Phillips, who carried on business as a chemist on the Marine Parade, Brighton, the whole of the debts having been paid in full. The application had been adjourned to allow of certain advertisements being issued, and it was now granted.

#### BLACKPOOL.

On Tuesday evening, July 28, a disastrous explosion occurred in the shop of Mr. Jackson, chemist, Blackpool. One of the assistants was reaching a bottle of spirit, when it accidentally exploded, and immediately the shop was one flame of fire. Two plate-glass windows were blown straight out, and two others were cracked. The stock-in-trade was rendered entirely worthless.

#### CHESTER.

The business of the late Mr. Blelock, the Cross, Chester, has been purchased by Mr. Andrew Donald, of Perth, who will carry it on as "Donald & Co."

#### LEAMINGTON.

**A PHYSICIAN FINED FOR POISONING DOGS.**—At Leamington, on August 5, Walter Watson Moorland, Kenilworth, retired physician, was fined 2% 17s. for destroying dogs at Kenilworth with poisoned meat. Recently the death-rate among dogs at Kenilworth has been abnormally high, and, suspicions attaching to the defendant, he was watched, and seen to deposit poisoned meat in the shrubbery, which he now pleaded was to poison rats.

#### LIVERPOOL.

**TREAT TO EMPLOYÉES.**—Mr. W. T. Warhurst, who is one of the largest of the retail chemists and druggists of Liverpool, gave his annual summer treat to his employés, their wives, and a few friends on last Bank Holiday. The party, numbering fifty-five, left the Central Station for Hunt's Cross, where a sumptuous repast was admirably served at the hotel. The toast of the bishop and clergy of the diocese was responded to by the Rev. Dr. Hyde and the Rev. J. W. Welsh. "Success to the firm of W. T. Warhurst" was proposed by Mr. H. Jackson, who spoke of the great success which had attended Mr. Warhurst's efforts to gain the confidence and support of the public, and said that the reason of that success was not far to seek, as his numerous establishments were all conducted upon the principle of equity and fair dealing. Mr. Warhurst acknowledged the compliment paid him in suitable terms. Dr. Sheldon proposed the health of "The Ladies" in felicitous terms, and Mr. Marsden responded. Subsequently athletic sports and dancing on the green to an excellent string band formed part of a delightful programme, and the party returned after spending a most enjoyable day.

#### MANCHESTER.

**LIBEL.**—On July 31, at the Liverpool Assizes, Fred Pett was sentenced to four months' imprisonment for libelling George Fairclough, 36, Green Lane, Princess Street, Manchester, oil and grease manufacturer. The defendant had been in the employ of the prosecutor as salesman, and on April 26 wrote to Mr. Fairclough that unless he was paid two years' salary and 100% expenses, a circular would be sent to all that gentleman's customers, stating that for two years all invoices had been systematically carried out at 8½ lbs. to the gallon instead of 9 lbs., as was proper, thereby robbing the buyer of ½ lb. of oil to every 9 lb. invoiced. The jury found the prisoner guilty of libel simply, without deciding if he knew it to be false. This reduced the penalty to half or a third of what it would otherwise have been.

#### NEWCASTLE-ON-TYNE.

**A NEW SCHOOL OF PHARMACY.**—Another attempt is being made to organise an efficient school of pharmacy in this town, and the project drawn up leaves nothing to be desired, unless it may be students. The proposal is to give a complete course of technical instruction, extending over forty weeks, at an entire fee of five guineas. This will include a laboratory course occupying three hours one day per week, together with lectures on chemistry (Professor P. P. Bcdson, D.Sc.), botany (Mr. C. E. Stuart, B.Sc.), and pharmacy and materia medica (Mr. B. S. Proctor and Mr. Alf. Wright, A.K.C.). Students will have to give either the whole of Friday of each week, or Monday and Friday evenings and Wednesday afternoons. The laboratory practice will be provided in the well-equipped chemical laboratory of the Durham College of Science, and will form a complete course in experimental chemistry on the basis of Professor Atfield's Pharmaceutical Chemistry as can be accomplished in the time. With such an exceptionally strong staff of lecturers, the advantages offered to pharmaceutical student in this town ought to make it a favourite residence for chemists' assistants and apprentices. But it must not be forgotten that already three previous well-arranged scheme of pharmaceutical education have been established here and have died out, and it may be that nothing short of a compulsory curriculum will secure enough attendance to maintain life in such an institution.



## SCOTLAND.

EVERAL weeks ago it was rumoured that an eminent English firm was about to open a branch pharmacy in Scotland. It is now known that the firm is Messrs. Allen & Hanburys, of Plough Court, London, and the spot which they have selected is Strathpepper. Strathpepper Spa is the Buxton of Scotland; the waters have long been esteemed in the north of Scotland, and of recent years the fame of the place has spread southwards. English visitors are numerous and increasing—circumstances due to fashion, probably. The Duchess of Sutherland is the owner of the place. There are two springs, one of which is stronger in  $H_2S$  than any other natural water in the British Isles. It is said to be good for gout, rheumatism, sluggish liver, &c. The scenery is fine, but there is nothing entertaining about the place.

At the Sheriff Court, Dundee, on the 3rd inst., a woman was convicted, under the Poisoned Grain Prohibition Act, for preading in her garden oatmeal with which the heads of some lucifer matches had been mixed, with the intention of destroying her neighbours' hens. It was urged by the prosecutor, and admitted by the accused (who pleaded guilty), that the mixture was calculated to destroy life. Sheriff-substitute Smith imposed a nominal fine of 2s. 6d. The case is noteworthy from the fact that the Sheriff considered that she would scarcely be so stupid as to touch phosphorised oatmeal; also from the fact that "a poison," under the Poisoned Grain Prohibition Act, need not necessarily be a poison under the Pharmacy Act. If a substance is *decalculated to destroy life* that is sufficient for a conviction.

In the examination for the Murchison Memorial Scholarship, held in Edinburgh in July, Mr. Sydney Plowman, F.R.C.S., London, attained the honourable position of *proxime cessit*.

Professor Greenfield, in his address to the medical graduates of Edinburgh University, on August 1, remarked:—"There are many who long for the good old times when the skilful compounding of pills and potions, and the aiding of a parish doctor to bleed, leech, and blister his poorer patients, constituted the portal to medical studies. . . . Yet I have no doubt that in the future the earlier training of all highly-qualified medical men will tend to become even more scientific, and that a more intimate knowledge of physics and chemistry, of comparative anatomy and physiology, and of what will become essential to the further evolution of medical science." These words are not surprising, coming from a Scotch professor, for in Scotland dispensing by medical men is the exception and not the rule. But Professor Greenfield is an Englishman, and it is to be hoped that those of his hearers who have come across the border will have carried the inference with them.

THE LIGHT-FINGERED GENTRY OF GLASGOW have got old of a powerful narcotic. A member of the circle and a respectable "gentleman" adjourned to a public-house on the evening of July 20, and were supplied with liquid refreshment. Within a minute after the gentleman tasted his liquor he became insensible, and 40l. in bank notes, a gold watch, some trinkets, and his quondam friend disappeared. There is a wide and more legitimate field for that narcotic as a patent medicine.

We understand that two petitions have been sent to the City Council—one from members of the Pharmaceutical Society resident in Edinburgh and Glasgow, and one from other members of the Society residing in Aberdeen—praying the Council to withhold confirmation of the proposed by-laws on the grounds that the ruling from the chair at the last special meeting prevented the proper discussion of the by-laws, and also that clause 4, sec. 6, had not passed the Council at the requisite three meetings of Council, as directed by the charter and by-laws.

Mr. W. M. Manson is opening a new shop in the Morning-side district of Edinburgh. The drug stores in this city average about 1 for every 700 inhabitants, besides a dozen or more free dispensaries, and an infirmary second to none in the kingdom.

## STOURBRIDGE.

ON Friday, July 31, a fire broke out on the premises of Messrs. Bland, mineral-water manufacturers, when a large warehouse and its contents were destroyed. Thousands of bottles were melted. The flames at one time shot up 50 to 60 feet high, and threatened adjacent buildings. The fire brigade did good service, and had a jet playing within five minutes after the alarm.

## WOLVERHAMPTON.

SUDDEN DEATH OF A CHILD.—Mr. W. H. Phillips (coroner) opened an inquest on Thursday, August 6, respecting the death of Julia Jones, aged eighteen months, whose parents reside at No. 2 Court, Great Moore Street. The evidence showed that the child, which had been a healthy one, was taken ill on Sunday night, and on Monday Mr. W. Hodgkiss, herbalist, Piper's Row, was consulted, and he supplied some medicine. After a dose had been given the child it became worse, and died the same day. Mr. Hodgkiss gave a certificate that the child died from convulsions, and signed it "William Hodgkiss, M.D.U.S." The registrar declined to accept the certificate. The inquiry was adjourned.

## THE CONFERENCE MEETING AT ABERDEEN.

THE visit of the British Pharmaceutical Conference to Aberdeen next month will, no doubt, be made the occasion by some of our readers in the South of a more extended Scottish tour than would be included in a direct run to and from the Granite City. With the object of helping such to "do" the chief sights as conveniently as possible, the following notes have been made for us by one conversant with the country.

Aberdeen may be reached from London in about thirty-four hours by sea, and from fourteen to eighteen hours by rail. The comfortable steamers of the Aberdeen Steam Navigation Company leave London (tender from Temple Pier) every Wednesday and Saturday, at hours to suit the tide as per time-table to be obtained at 102 Queen Victoria Street, E.C.; single fares, 30s. and 15s.; return, 45s. and 25s. On Wednesday, September 2, one leaves at 4 P.M., reaching Aberdeen on Friday morning; on Saturday, September 5, one leaves at 10 A.M., arriving on Sunday evening.

The London and North-Western (six trains daily), the Great Northern (four trains daily), and the Midland (three trains daily) Railway Companies give through carriages and connections. The first is the most direct, but the others are frequently selected by tourists on account of the more varied and picturesque scenery.

Tourist return tickets are issued by all lines, third-class to Aberdeen 56s., or to Inverness *via* Aberdeen 60s. These tickets are available till December 31, and enable the holder to stop at all important points in England, and at any station in Scotland on the direct route, also at Edinburgh and Glasgow. Guides and tables are issued by the respective companies, whose by-laws state that the transfer or exchange of the return halves of tourist tickets is an offence. From its position Aberdeen may be worked into a Scottish tour embracing almost any part of the country. The most interesting points after crossing the border are the abbeys and Abbotsford in the Melrose district, where one or two days may be well spent; Edinburgh, two or more days; Hawthornden and Roslin from Edinburgh, one day; the Trossachs, Loch Lomond, &c., taken *en route* for Glasgow from Edinburgh, or *vice versa*, one day, and without doubt the most varied and attractive day's trip in this country—if the weather be favourable. The Clyde, Loch Goil, Loch Long, Kyles of Bute, Loch Fyne, and the Island of Arran are best visited from Glasgow (St. Enoch's Station Hotel). The "crack" steamers are the *Columbia*, *Lord of the Isles*, and *Ivanhoe*; they sail every morning.

Inland, Loch Tay and Loch Awe are most attractive after Loch Lomond and Loch Katrine, which are taken on the Trossachs tour. Oban, the capital of the Western Highlands, can now be reached by rail, through most romantic scenery, as well as by sea, and is the centre of the grandest of the



Scottish island, loch, and mountain scenery, and from this point the journey may be continued by Caledonian Canal to Inverness, or through the Western Islands to Skye and the Loch Maree district, whence the tourist is conveyed by rail *via* Inverness and Elgin to Aberdeen.

The scenery of the East of Scotland is commonplace, except at a few points where the cliffs are worthy of a visit, the most convenient being at Muchalls to the south, and the Bulters of Buchan, about 30 miles north of Aberdeen.

A steamer sails twice a week to Orkney and Shetland, but June is the best month for visiting these "Islands of the midnight sun."

Braemar, the spot happily selected for the excursion, lies in the heart of the Grampians, 62 miles by rail and coach from Aberdeen; usual fare is 18s. The village (Castleton) is 1,100 feet above the sea-level, and several peaks rise around to upwards of 4,000 feet, on which large snow-fields lie unmelted well into the summer. It is accessible to wheeled vehicles in only one direction, besides *via* Balmoral. A coach runs daily to Blairgowrie and Dunkeld (47 miles) *via* the spittal of Glenshee, and affords a romantic means of joining the South railways without returning to Aberdeen.

Pedestrians, however, may go to Blair Athole by Glen Tilt (30 miles), and also to Aviemore on the Highland Railway (34 miles), across the mountains through Larig Pass, the height of which is 2,760 feet, and should not be attempted by any but the most robust, the route lying through a "chaotic desert of red-coloured boulders," there being no house for 18 miles of the way.

Intending visitors will be greatly assisted by procuring a copy of Murray's (of 52 St. Enoch Square, Glasgow), or Gray's (of Edinburgh) Railway Time Tables, by post 4½d., which contain advertisements referring to Scottish tours, of which there is an endless variety and combination, and as the enjoyment of a holiday is greatly helped by a reliable guide book, Baddeley's "Scotland, Part I," 1885, published by Dulau & Co., 37 Soho Square, W., at 7s., and in part re-written this season to meet the demands of British Association tourists, is on the model of the Continental "Baedeker," and the best Scottish guide published. Its information is to the point, its maps numerous and good, and it just fits the pocket. It is written from an English standpoint, and the growls and grumbles are put in at the right places, and thus it saves much anxiety to the typical John Bull.

H.

## PHARMACY IN AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, VICTORIA, June 24.

### LEGAL CASES.

I mentioned in a former letter that an important appeal case in reference to the liability of a master for the acts of his servant was about to be tried in the Supreme Court. The case was heard recently. It was an appeal from the determination of Graham Webster, P.M., and A. L. Wilton, J.P., in a case heard by them in Sandhurst, between Harry William Shillinglaw, Registrar of the Pharmacy Board of Victoria, and Ah Hen, a Chinese storekeeper at Ironbark. The information, which was laid under Section 3 of the "Sale and Use of Poisons Act, 1876," alleged that the defendant, on September 12, 1884, at Ironbark, being other than a legally-qualified medical practitioner or a registered pharmaceutical chemist, and not holding a certificate from the Pharmacy Board of Victoria to sell poisons, did sell a certain poison within the meaning of the Act, to wit opium. The defendant pleaded not guilty, and, after hearing the evidence last October, the magistrates dismissed the information with 2l. 2s. costs against the prosecutor, who now appealed on a point of law. It was proved that an officer of the Board entered the defendant's shop and purchased some opium for the sum of 2s., which he gave to a person standing behind the counter, and while there he saw other persons entering the store and buying opium, and that he saw the person who sold the opium put the money in a box on a shelf behind the counter. The magistrates dismissed the case on the ground that there was not proof to their

satisfaction that the person who sold the opium was the servant or agent of the defendant, and, even if they had been satisfied, the defendant was not liable for the sale in his absence. The question for the opinion of the Court was whether the determination was erroneous in point of law. Defendant's counsel at the outset objected that plaintiffs had unwarrantably delayed the prosecution of the appeal, and this objection was sanctioned by the Court, and the case was therefore dismissed with costs.

It is a pity that so important an issue should have been set aside on technical grounds, as the defence which has thus for the moment been established is a novel one, and, if reliable, frustrates the intention of the Legislature in regard to the sale of poisons.

Another interesting case in which the Pharmacy Board were concerned, and which has also been previously mentioned, recently came before the Supreme Court. It was an application for a *mandamus* to compel the Pharmacy Board to restore the name of Wm. F. G. Nettleton to the pharmaceutical register of Victoria. In 1879 Nettleton was convicted on a charge of illegal practice, and was sentenced to a long term of imprisonment. While he was in gaol the secretary of the Pharmacy Board wrote a letter to his registered address, as follows:—"I beg to draw your attention to the 14th section of the Pharmacy Act. If you do not forward the required information your name will be omitted from the next published pharmaceutical register." Nettleton did not answer the letter within six months, and the Board erased his name from the register. After his release, Nettleton, in 1882, applied to be reinstated on the register, but the Board, having regard to his character, declined to comply with the request. Section 13 of the Pharmacy Act provides "that the Board may from time to time write a letter to any registered pharmaceutical chemist, addressed to him according to his last-known address, to inquire whether he has changed his residence, and if no answer be returned to such letter within the period of six months from the sending thereof, the Board may erase the name of such person from the pharmaceutical register, and may restore the same to such register upon the personal application of such person and production of his certificate or satisfactory proof of his former registration." The letter to the plaintiff was, however, not sent under that section, but under Section 14. Mr. C. A. Smyth, who appeared for the Board, contended that they had a discretion as to restoring the name, even although they might not have proceeded regularly under Section 13 in erasing it. His Honour asked whether the name of a person who committed an offence such as Nettleton had done could not be erased. Mr. Smyth replied that the provision for striking names off the register after offences related only to offences committed against the Pharmacy Act. His Honour said that he thought the Board had not taken the proper proceedings to erase Nettleton's name in the first instance. If they had proceeded under Section 13 they would have had the power to erase the name, and he would not have interfered with their discretion in refusing to restore it. He granted the *mandamus* to compel the Board to restore Nettleton's name to the register.

### A NEW WAREHOUSE.

Messrs. Elliott Brothers, Sydney, have just had new premises built for them, the last stone of which was laid a few days ago, by Mr. F. W. Elliott, the senior partner, in the presence of a number of his fellow-citizens. Among the speakers on the occasion was Mr. Prosser, another wholesale druggist in the City, who expressed the opinion that there was room for all in New South Wales, and who joined in heartily wishing Messrs. Elliott Brothers even greater success than they had yet had.

The new warehouse covers a large area between O'Connell and Bligh Streets, and has an extensive frontage to each thoroughfare. The contract for the work was let in April, 1884, at a cost of something like 28,000l. The portion facing Bligh Street has six floors, including the basement. The upper floor will be the laboratory, and the floor is fire-proof, being formed of concrete. There is an approach from this floor to the roof, where there is a large plat forming a yard for the purpose of drying lint, &c. Each floor is very lofty and well lighted, and has been designed to carry an immense weight. The basements have been well studied, and are



perfectly drained, and floored with concrete and covered with asphaltum. This has been done in order to protect the goods from any possibility of dampness. All are arranged conveniently, and solidly built. There is communication between the floors by hydraulic lifts, and all the latest improvements have been introduced. The height from the floor of the basement to the apex of the roof is 82 feet. The total area of floor-space is 16,168 feet. A spacious covered way, which will also be used for the storage of goods, unites this with the O'Connell Street building. This has seven floors, including basement, and possesses a total area of floor-space of 46,492 feet, and a total height from floor of basement to apex of roof of 101 feet. In this building are the offices, the entrance for customers, a magnificent staircase, together with hydraulic lifts for passengers and goods. Both buildings have handsome exteriors, and are regarded as worthy additions to the architecture of the city. The bricks used in the buildings number over 2,000,000.

#### THE PROPOSED INTERCOLONIAL PHARMACEUTICAL CONFERENCE.

There is not much to report in reference to the proposed intercolonial pharmaceutical conference. At a recent meeting of the Pharmaceutical Society of Australasia, a resolution was passed that the Society would have great pleasure in sending delegates to the conference to be held in Sydney, in September next, providing all the colonies, including New Zealand, South Australia, and Tasmania, were represented, and that the principal matter to be submitted to the conference from Victoria would be the desirability of one uniform system of pharmaceutical education for all the colonies.

#### THE QUARTERLY EXAMINATIONS

If pharmaceutical students were held at the commencement of the month, at the College of Pharmacy. Twenty candidates in all presented themselves, and of this number thirteen passed.

#### THE QUEENSLAND PHARMACY BOARD.

The Queensland Government Gazette of May 16 contains the notification of the appointment of the following gentlemen, who will constitute the Queensland Pharmacy Board:—J. Clement Ellison, M.B., James Hill, M.D., John K. Benson, M.D., Edward Taylor, C. H. Fletcher Yeo, James H. Fitzgibbon, and Alfred W. Field.

#### A PHARMACY BILL FOR SOUTH AUSTRALIA.

From South Australia I hear that active steps are being taken to bring about legislation on pharmacy in that colony, and a number of the principal chemists are moving to get the Government to introduce a Pharmacy Act. Considerable correspondence has taken place on the subject in the Adelaide daily papers, from which it is hoped good results may come.

#### BUSINESS IN AUSTRALASIA.

I hear general complaints as to the dulness of business in South Australia and New Zealand. With us things are much as usual at this the dull season of the year. The number of English and American firms who desire to push business in the colonies daily increases, and as a consequence numbers of travellers have recently visited us. They all express themselves satisfied with the business done, so that after all trade cannot be so very bad.

**EXPLOSION IN A DYNAMITE FACTORY.**—At the Kolner Dynamite Factory at Eil, near Mulheim, the director noticed that the glycerine and nitric acid were being submitted to a too high temperature, and that there was imminent danger of an explosion. He immediately called all the workmen out of the factory, and four minutes after the place was cleared there was a violent explosion, which utterly destroyed the whole of the buildings. A high wall surrounding the factory prevented any injury to the neighbouring buildings.

#### PHARMACEUTICAL SOCIETY OF NEW SOUTH WALES.

THE subjoined synopsis of examination of the Pharmaceutical Society of New South Wales has been adopted by the Pharmacy Board of New South Wales, and came into force on July 1 last:—

#### BOARD OF EXAMINERS:

Materia Medica, Prescriptions . . . W. LARMER.  
Practical Dispensing, Pharmacy . . . B. F. BOZON.  
Botany, Chemistry . . . . . JAMES MAYNE.

This examination shall include prescriptions, practical dispensing, materia medica, botany, pharmacy, and chemistry. The candidate must give to the Registrar notice of his intention to present himself for examination, and pay the fee of three guineas ten days prior to the day of examination. In case of rejection a rejected candidate may present himself for re-examination after a period of six months. Candidates for this examination must have passed the preliminary examination. Each candidate must produce a certified declaration that for three years he has been registered and employed as an apprentice to a qualified chemist, keeping open shop for the compounding and dispensing of physicians' prescriptions.

The candidates will be examined in the following subjects:—

**Prescriptions.**—The candidate is required to read, without abbreviation, autograph prescriptions, translate them into English, and render a literal as well as an appropriate translation of the directions for use. To detect errors, discover unusual doses, and have a general knowledge of posology; also to render in good Latin ordinary prescriptions written in English.

**Practical Dispensing.**—To weigh, measure, and compound medicines, write the directions in concise language, in a neat and distinct hand, to finish and properly direct each package. (In awarding marks in this subject the time taken by the candidate in doing the work is taken into account.)

**Pharmacy.**—To recognise the preparations of the Pharmacopoeia which are not of a definite chemical nature, and have well-marked physical characters—such as extracts, tinctures, powders, &c.; to give the proportions of the active ingredients, and possess a practical knowledge of the processes, and the principles of the processes by which they are made, and of the best excipients and methods of manipulation for forming emulsions, pills, &c.

**Materia Medica.**—To recognise specimens of roots, barks, leaves, fruits, resins, gums, animal substances, &c., used in medicine; give the botanical and zoological names of the plants, &c., yielding them, and the natural families to which they belong; name the countries and sources from which they are obtained, the official preparations into which they enter, and judge the quality and freedom from adulteration or otherwise of the specimens. It will also comprise a practical knowledge of the methods of estimating the value of important drugs, of obtaining their active proximate constituents in a separate state, of identifying them and ascertaining their purity or impurity by tests.

**Botany.**—This comprises an intimate acquaintance with the parts of the flower, fruit, and seed; the functions and mode of arrangement of the different organs of plants; a knowledge of the general principles of classification, and of the Linnaean and De Candolle's systems. The candidate must be able to distinguish, practically, each of the following natural orders:—Ranunculaceae, Papaveraceae, Cruciferae, Malvaceae, Leguminosae, Rosaceae, Cucurbitaceae, Umbelliferae, Compositae, Gentianaceae, Convolvulaceae, Solanaceae, Atropaceae, Labiatae, Scrophulariaceae, Polygonaceae, Euphorbiaceae, Orchidaceae, Iridaceae, Liliaceae, Melanthaceae, Gramineae; and refer to their respective orders such specimens as may be shown to him.

**Chemistry.**—This comprehends an intimate knowledge of the laws of chemical philosophy; a practical knowledge of the nature and properties of the elements and their compounds, both organic and inorganic, especially those used in medicine or the Arts. The different combinations and de-



compositions must be explained by equations. Also, the qualitative analysis of the more important chemicals—*e.g.*, Nitrates, Chlorides, Carbonates, Sulphates, Phosphates, Oxalates, Tartrates, &c., and the detection of impurities in them; and the volumetric estimation of the strength of all Pharmacopœia preparations in which standard solutions are ordered to be used. An elementary knowledge of the properties of light, heat, electricity, and magnetism is also required.

*Text Books.*—The following are the text-books prescribed by the Board:—"The British Pharmacopœia;" Pereira's "Materia Medica," edited by Professors Bentley and Redwood; Bentley's "Manual of Botany;" Squire's "Companion to British Pharmacopœia;" Attfield's "Chemistry—General, Medical, and Pharmaceutical;" Fownes' "Manual of Chemistry;" Proctor's "Pharmacy."

Sydney, June 1, 1835.

## THE DRUG TRADE WITH SPAIN.

(Concluded.)

THE statement made at the finish of the last article will probably have disgusted a great many of our straight-laced exporters, but it is nevertheless a fact, and carried out by many first-class French houses to facilitate business with the smaller customers, who are always anxious to know what the goods will cost them delivered.

Statistics prove that England's exports have fallen off to a serious extent, and there can be no doubt that this is due not only to excessive cost of production, owing to more expensive labour, &c., but also in as great a measure to the conservative habits of our merchants and exporters, who do not lay themselves open to do the trade in accordance with the customs of each and every country, and who shut their eyes wilfully to the good business done by foreign competing houses by supplying the articles required according to the customs and stipulations of each nation.

Another difficulty, which perhaps exists for Spain only, is the want of a regular line of ships sailing at fixed dates. A present there are only Messrs. MacAndrew's steamers sailing from London at most irregular dates, supposed to be through waiting for sufficient cargo, and Messrs. Hickman's schooners, which have also got into irregular habits, but, besides, are not in good odour with merchants in general, because Messrs. Hickman, not satisfied with being shipowners and doing a simple carrying trade, are themselves merchants for all and everything, quoting very close prices for goods, cost, freight, and insurance. From Liverpool, Bahr Baring's steamers can almost be called a regular line, sailing pretty punctually. Besides these lines there are the empty mineral-steamers constantly running to Spain from Cardiff, Newport, Middlesborough, Glasgow, and Newcastle, nearly all of which are open to bring out cargo, and could be made use of very conveniently for a regular export trade of produce from these parts and vicinity.

For general cargo to all Spanish ports it should be an advantageous combination for any of our English shipowners to make arrangements for transshipment with a good Spanish line of coasting-steamers. Messrs. Ibarra & Co., of Sevilla and Bilbao, who up to the present have had a steamer running every week between the two ports, have now decided to run quite round the Spanish coast from Bilbao up to Barcelona, and thence to Marseilles, with transshipment for all Italian ports and the East. A weekly steamer from London and from Liverpool to Bilbao, in combination with this coasting line of Spanish steamers, should do well, and is all that is required. They could return with a small general cargo, principally of wine, or, if suitable, could always fill up with iron ore; and the day may perhaps yet come when they will take a return cargo of Spanish pig iron, although this may look like taking coals to Newcastle. Whilst on this subject, it may as well be noted here that the excessive shipping charges in London and Liverpool are also greatly against our export trade, as compared with the far more economical rates at foreign ports. On small lots of goods the shipping charges generally amount to as much as the freight.

It is not only the export trade to Spain that wants developing, but the drugs and produce that could be—and are, to a certain extent—imported from Spain are well worth looking after. Cantharides, ergot of rye from Galicia; black liquorice and liquorice root from Zaragoza and Sevilla; saffron from Valencia, Alicante, Ciudad Real, and Zaragoza; rose petals, gentian root, medicinal flowers, roots and leaves of all kinds from Leon and other parts; honey, essence of rosemary, oil of juniper, &c., from Guadalajara; olive oil—finest table from Valencia, not so well refined from Sevilla, Zaragoza, and Rioja; red wines from Rioja, strong qualities; from Aragon, sweet and strong; from Tarragona, all kinds, imitating French wines; from Navarra, light quality; from La Mancha, splendid bright wines, especially Valdepeñas. White wines are principally from the South, including sherries and Manzanillas, from Jerez, Sevilla, and Huelva. There is a great future for Spanish wines, and even with our present duties they could be very profitably introduced into England direct, instead of passing through Bordeaux, to be manipulated, diluted, and mixed, and then sent over to England for French wines. Spain is at present suffering from a terrible outbreak of cholera, which is daily striking down 2,000 victims, and there can be little hope of its dying out before the end of October, but when this crisis is passed then will be the time for the English exporter to direct his attention to this country, which, properly worked, he will find far beyond his expectations.

## THE DRUG TRADE IN INDIA.

### A FRONTIER PHARMACY.

I AM glad to hear that Messrs. H. Baldwin & Co., of Quetta, are doing a good business. Mr. Baldwin, who was lately with Messrs. Treacher & Co., has displayed great energy and determination in taking advantage of the Anglo-Russo crisis by establishing a business at the extremity of British territory, and it must have been a great work to have got all the appurtenances of a druggist's shop through the Bolan Pass. I believe Mr. Baldwin is the only qualified chemist and druggist in that remote region.

### ASSISTANTS IN INDIA.

All is not gold that glitters. Let not assistants desirous of coming to the East Indies imagine that they are going to a place where they will have very little work. I can assure them that they will find nothing of the kind. Work here is every bit as hard and more trying than at home, and holidays are fewer in number. In some businesses the hours are shorter—eleven in number—whilst in others they are twelve to thirteen; but in some instances part of the Saturday afternoon is at their disposal—a gain to the other side of the question. Bank holidays are not observed by the trade, although Government offices and banks are closed.

Before an engagement is made with London agents it is important to consider the falling value of Indian money. The rupee is now worth no more than 1s. 6 $\frac{1}{2}$  in sterling gold, and in all probability will fall still further in value. London agents will endeavour to persuade applicants that it still has the same purchasing-power in India as formerly, which is untrue. One pays a rupee for European goods worth a shilling at the ordinary retail shops in England, and, excepting food, common necessities of life are imported; so that it is advisable to remember a salary of 1,600r. per annum is not worth 160%, but only 120%.

After all, however, the climate is the worst thing to consider. All are subject at some time or another to sickness, generally taking the form of fever, ague, or dyspepsia, accompanied by great debility. No one should engage without a proviso in the agreement with regard to finding medical attendance.

Socially, I am glad to say, assistants are in a much better position, and there are few young men who come out who can sing a good song and behave in a gentlemanly manner that are not welcome after business is over for the day in the Indian bungalow.



## CANNABIS INDICA.

Like opium in China—although, of course, not to such great extent—cannabis indica is the constant intoxicant in use in India by the lazy classes of natives. The following paragraph in a Calcutta paper will help to show to what extent the habit is contracted and the baneful results from continued use of the drug:—

“There are five natives at present in the Campbell Hospital being treated for madness caused by smoking ganja. These men were in the habit of smoking this drug, which ultimately affected them to such an extent that it necessitated their being removed to hospital, where they have been placed in cells.”—*Indian Daily News*, Calcutta.

Students of materia medica well know that ganja is the true hemp tops, and that the retail sale is limited to licensed dealers, who pay annually a handsome tax to Government to be able to sell bhang and ganja, the two varieties of Indian hemp. A curious and ingenious way of getting revenue is adopted by the Government, as seen by the accompanying advertisement. It reminds one of Turkish tax-farming:—

## NOTICE.

THE right to sell by retail Bhang and Ganja and their preparations at the several shops in the Poona Collectorate for one year from August 1, 1885, to July 31, 1886, will be sold by public auction, subject to the confirmation of the Bkari Commissioner, on Wednesday, June 24, 1885, at 11 A.M., before the Huzur Deputy Collector, Poona.

The conditions of sale and other particulars may be ascertained from that officer.

H. EAST,

Poona, Collector's Office, Acting Collector of Poona.  
June 11, 1885.

From the above facts it would be well for chemists tailing cannabis indica cigarettes for asthma to inform their customers of the dangerous effects likely to be produced by their continued use.

## ENTERPRISE IN CALCUTTA.

Another Indian correspondent sends us some particulars of the enlargement of premises of the old-established firm of Smith, Stanistreet & Co. by the addition of a fine new stockroom, so that their premises now occupy about one-third of the east side of Dalhousie Square, and go right through to Mission Row.

The sole proprietor of this firm, Dr. C. N. Kernot, annually visits Europe, and thus keeps himself and his firm fully acquainted with all Western novelties. In India Smith, Stanistreet & Co. are known as one of the most enterprising firms. They buy for cash, are their own underwriters, and are constant advertisers. They have a large and modern soda-water factory, and at the recent Calcutta International Exhibition they obtained four first-class certificates and four silver medals. The firm was established in 1821, and became the property of Dr. Kernot some fifteen years since.

**HOW TO TAKE A PILL.**—Dr. H. Asthalter, of Pittsburgh, writes to the *Medical and Surgical Reporter* to recommend an infallible method of taking pills. Place one or more pills under the tongue; then take a mouthful of water or other liquid, and swallow just as in the act of drinking; this done, look for the pill, and, if necessary to secure conviction, investigate the mouth with the finger. In the act of drinking the tongue curved back upon itself, and the pill, taken by the force of the current, was imperceptibly washed down the oesophagus. He suggests that these directions should be printed on every label intended for pills.

**AN OINTMENT FOR SORE NIPPLES.**—Groussin (*Lyon Med.*) recommends, for application to sore nipples in nursing women, the following ointment:—

Sacch. alb.	..	..	..	..	..	3j.
Zinci ox.	..	..	..	..	..	3j.
Acacie	..	..	..	..	..	3j.
Glycerinae	..	..	..	..	..	3j.
Mft. ungt.						

—*Phil. Med. Surg. Rep.*

## ON THE EXTRACTION OF THE ALKALOIDS FROM CINCHONA BARK BY DILUTE ACIDS.

BY DR. J. E. DE VRIJ, C.I.E.

MANY years' experience has taught me that all the alkaloids contained in cinchona bark can be completely extracted by treating the bark in fine powder with hydrochloric, nitric, or phosphoric acid, but that extraction cannot be completely effected by sulphuric acid. This has been disputed by some chemists, and by no one more strongly than by Dr. B. Paul, who stated at the evening meeting of the Pharmaceutical Society, held on December 3, 1884, as the result of recent investigations on various succirubra barks, that they retained nearly 50 per cent. of their alkaloids after extraction by hydrochloric acid.\* But since, as I showed some years ago,† 40 per cent. of the alkaloids present in cinchona bark may be extracted by cold water alone, Dr. Paul's statement will appear on the face of it extremely improbable. I have, nevertheless, been induced to make a new and accurate investigation of this matter, thus late in my career, by the fact that other chemists have also obtained unsatisfactory results in attempting to extract the alkaloids of cinchona bark by dilute hydrochloric acid.

When I published, some years ago,‡ my process for the preparation of ext. cinchonae liq., in which two molecules of HCl are used for each molecule of total alkaloids, I pointed out that a material quantity of alkaloid, amounting to about 20 per cent. of the whole, was left behind in the bark. It follows, therefore, that if—as I hope to show—the extraction of the whole of the alkaloids by dilute HCl is possible, more than two molecules of the acid must be used. The explanation of this is that the alkaloids do not exist in the bark in the free state, but in combination with quinic, quinovic, and more largely with cinchotannic acid. When also it is remembered that the amount of the latter (cinchotannic acid) is often very considerable, reaching, as I have recently observed in a bark of cinchona officinalis, to more than 12 per cent., as against 6.72 per cent. of alkaloids, and when we consider the influence of quantity in chemical reactions (l'influence des masses), as propounded by Berthollet in his “Statique Chimique,” the necessity for a preponderating quantity of acid will require no further demonstration.

A series of observations on bark of C. officinalis and succirubra showed that four molecules of HCl (4×36.5) sufficed for one molecule of total alkaloids, of which the molecular weight may be taken to be 310. Supposing, therefore, that the total alkaloids of the bark to be operated upon do not exceed 10 per cent., 17 grammes of strong HCl, containing 30 per cent. of real HCl, will be sufficient for the complete extraction of 100 grammes of finely-powdered bark. More acid must be used in those rare cases in which the alkaloids exceed 10 per cent.

The method of applying the quantity of acid thus determined is also important to the success of the operation. The acid should be mixed with a portion of water equal to the quantity of bark, and the bark should then be added so as to form a thick paste, which is to be left for some hours. More water is then stirred in until the whole is sufficiently fluid to pour freely. Much foam is formed at this stage, and it is necessary to postpone the next operation until the foam has entirely disappeared. Percolation is then effected in a cylindrical glass tube with constricted exit, which is closed by a loose plug of “charpie.”§ As soon as the percolate begins to run clear it is collected, percolation being kept up by pouring on distilled water until excess of caustic soda ceases to produce a precipitate in the passing percolate.

I must now allude to two matters, one of which has been publicly advanced as an objection to the above process, whilst the other has been communicated to me privately.

\* *Pharmaceutical Journal*, December 6, 1884.

† *Hoarman's Tydschrift der Pharmacie*, 1879. P. 258.

‡ *Hoarman's Tydschrift der Pharmacie*, 1880. P. 5.

§ “Charpie” is the French name for threads of old linen. Upon this apparently insignificant agent the success of the operation largely depends, whether it shall be completed in a few hours, or whether it may be prolonged for days.



1. It has been objected that after the percolate, as above, has ceased to be acted upon by caustic soda, the addition of the well-known reagent iodide of mercury and potassium shows a distinct alkaloidal reaction, and percolation must be carried much farther before this reaction ceases. Although not myself attaching importance to this objection, I have thought it right to ascertain by actual experiment how far it affects the accuracy of the process. Twenty grammes of succirubra bark were therefore treated in the manner described, until 180 c.c. of percolate had been recovered, when caustic soda ceased to produce precipitation. The percolation was then resumed until further 950 c.c. had been recovered, and the reaction with  $HgI_2$  and  $KaI$  had also ceased. To this second portion (950 c.c.) a sufficient quantity of the mercuric reagent was added, and the liquor was allowed to settle for some days, when the clear supernatant was decanted, and the precipitate was carefully collected on a filter. It was found that while the first portion of the percolate, 180 c.c., yielded 1.42 gramme of alkaloids, the second portion yielded only 0.031 gramme of the compound of alkaloids with iodide of mercury, corresponding to less than 0.015 gramme alkaloids. This inaccuracy, amounting to no more than 1 per cent. of the alkaloid present in the bark, is so small that it may, I think, be disregarded.

2. It has been remarked that the percolate, after running clear for a considerable quantity, presently becomes turbid. I have also sometimes met with this inconvenience, which I attributed some years ago to the behaviour of cinchotannic acid under certain conditions. In analysing 20 grammes of a sample of *C. officinalis*, which proved to be very rich in cinchotannic acid, I observed that after 97 c.c. of perfectly clear percolate had been recovered, the succeeding drops caused a slight turbidity in the previously clear liquor. The percolate was therefore separated at this point into two portions. While remaining apart both were perfectly clear, but when mixed together a very turbid mixture resulted. The explanation is simple. Cinchotannic acid is freely soluble in water, but scarcely soluble at all in acids. The earlier percolate, containing much hydrochloric acid, dissolved but little cinchotannic acid; the later percolate, being almost free from acid, dissolved much cinchotannic acid, which was again thrown out of solution when brought into contact with the previously collected acid percolate.\*

Although the whole of the alkaloids may be extracted from cinchona bark either by hydrochloric, phosphoric, or nitric acids, used in proportions equivalent to those quoted above, a slight difference will be observed in the results obtained when nitric acid is employed, the amount of alkaloid being less by a few centigrammes than that obtained by hydrochloric acid. The latter acid dissolves a coloured substance contained in cinchona bark, which is not alkaloid, but which behaves towards hydrochloric acid as if it were so. This substance is not soluble in nitric acid. If, therefore, the total alkaloids extracted by hydrochloric acid are afterwards treated with dilute nitric acid, the whole of the alkaloids will be redissolved, leaving a very small quantity of brownish matter unacted upon. I believe the behaviour of this brown residue to be one of the causes of discrepancy in analyses of bark performed by different methods.

To show that cinchona bark cannot be completely exhausted of its alkaloids by dilute sulphuric acid, 20 grammes of powdered bark (ascertained to contain 6.72 per cent. of total alkaloids by the hydrochloric-acid process above described) were treated with an equivalent quantity of sulphuric acid employed in the same manner. The first percolate (100 c.c.) was of a much paler colour than that obtained by hydrochloric acid; it was rendered only slightly turbid by caustic soda, or by  $HgI_2$  and  $KaI$ , and was only slightly reddened by the former. The percolation was continued until 677 c.c. had been recovered. This large volume (more than thirty-three times the weight of the bark) yielded only 0.807 gramme, or 4.035 per cent. of alkaloid. Percolation was therefore resumed until a further 800 c.c. were recovered, which yielded 0.063 gramme

alkaloids. The total results from 1,477 c.c. percolate (more than 70 volumes) was therefore only  $0.807 + 0.063 = 0.87$  gramme, or 4.35 per cent., from a bark known to contain 6.72 per cent. From this it must be concluded that sulphuric acid is practically incapable of extracting the whole of the alkaloids of cinchona bark.

Before proceeding to speak of the practical application of the above process, I may explain why I have always insisted upon the use of cold dilute acids in operating upon cinchona bark.

If bark powder, which has been completely exhausted of its alkaloids by cold hydrochloric acid, be heated to ebullition with more dilute  $HCl$ , and the liquid after being strained be accurately saturated by caustic soda, a voluminous red precipitate is formed resembling the so-called pectic substances described by Fremy, but containing not a trace of alkaloid. The intrusion of this matter makes the extraction of the alkaloids at a high temperature much more difficult, and is unattended with any advantages.

I have been thus minute in discussing the treatment of cinchona bark by dilute acids for two reasons, viz. :—

1. Because the extraction of the alkaloids from bark by hydrochloric acid has been extensively practised in Bengal since 1872 in the manufacture of the well-known cinchona febrifuge (sometimes called "Indian quinine"), and the process, which was adopted on my recommendation to the Secretary of State for India, has been condemned as *wasteful* by the editor of the *Pharmaceutical Journal*.\*

2. Because, as an old pharmacist, I wish all pharmacists to examine for themselves the quality of the cinchona bark that they use, and I consider the hydrochloric-acid process by far the most suitable for pharmaceutical uses. It is simple, inexpensive, thoroughly reliable, and practically (if not scientifically) accurate. It is also capable of indicating not only the percentage of alkaloids, but also the proportion of cinchotannic acid, which is of no small importance from a therapeutical point of view.

The following directions will enable pharmacists to obtain satisfactory results with facility :—

#### *Mode of Analysing Cinchona Bark by Hydrochloric Acid.*

Twenty grammes of finely-powdered bark are treated with hydrochloric acid and water as above described, whereby all the alkaloids are dissolved. The quantity of percolate which it is necessary to pass through the marc is usually from 180 c.c. to 200 c.c., which quantity will rarely be exceeded if the percolation has been successfully conducted. The estimation of the amount of alkaloids in this acid solution may be made in either of the following ways, viz. :—

1. The acid solution is precipitated by a large excess of caustic soda, which throws down a curd-like white precipitate. The precipitate is collected on a double filter,† and washed until the filtrate is nearly colourless. The whole of the filtrate is measured, and compensation made by adding to the weight of alkaloid, to be presently ascertained, 0.0585 gramme for every 100 c.c. of the mother-liquor at temperature  $15^{\circ} C$ . The drained filter is carefully dried upon blotting-paper until the precipitate ceases to adhere, when it may be easily detached without loss, and transferred to a small tared dish. It is now dried over a water-bath until it ceases to lose weight, and the weight is ascertained. Add the compensation above indicated for mother-liquor, multiply the sum by five, and the product is the percentage of alkaloids in the bark under examination.

The alkaline mother-liquor may now be used for ascertaining indirectly the percentage of cinchotannic acid. After exposure for two or three days in a shallow dish, by which the cinchotannic acid becomes converted into cinchona red,‡ the liquid is heated, and hydrochloric acid cautiously added to slight acid reaction. After cooling, the now turbid liquor is filtered through a double filter to collect the very voluminous precipitate of cinchona red. The precipitate is washed, dried, and weighed, the second filter being used

\* The above observations may be further verified thus:—Let 1 part *Indian* cinchona bark of any species be percolated with 4 parts water. To the clear percolate add excess of  $HCl$ , and an abundant precipitate of cinchotannic acid will be produced. *American* *calisaya* bark, on the contrary, shows no such reaction, in consequence of its small amount of cinchotannic acid.

\* *Pharmaceutical Journal*, September 13, 1884. P. 205.

† Doubling the filter facilitates the filtration.

‡ If the dark-red alkaline liquor becomes turbid during exposure to air the quantity of caustic soda is insufficient for solution of the newly-formed cinchona red, and more soda must be added.



as a tare.\* By multiplying the ascertained weight of cinchona red by 1·2, a close approximation to the weight of cinchotannic acid is obtained, from which its percentage may be calculated, and it will be seen that the quantity of cinchotannic acid in different species of cinchona, and even in different samples of the same species, varies considerably.

2. The acid solution is mixed with excess of caustic soda as before, and well shaken in a bottle with 1 litre of commercial benzol, and left standing for not more than five minutes, for the benzol, which now contains the alkaloids in solution, to separate.† The benzol solution is now decanted on a filter previously moistened with benzol, and the remainder is poured into a separating funnel. After sufficient time for separation, the red alkaline liquor is drawn off into the bottle previously used, and shaken with other 200 c.c. benzol to remove possible traces of alkaloid, and this benzoic solution is also filtered and added to the former. The amount of alkaloids contained in the mixed benzoic solutions may now be determined either directly or indirectly in the manner following, viz. :—

#### Direct Determination.

The benzoic solution is shaken with 30 c.c. very dilute nitric acid, the acid solution is drawn off and replaced by 20 c.c. water, which is again shaken and added to the first. The liquors are heated to drive off traces of benzol, and when cool transferred to a separator and shaken with 200 c.c. ether, and an excess of caustic soda. In this way *all* the alkaloids are dissolved by the ether,‡ leaving generally a slight brown film on the surface of the alkaline liquor, *which is almost entirely soluble in chloroform*.§ After separating the ethereal solution a further 100 c.c. ether is shaken with the alkaline liquor, and is then added to the first. By distillation of the ether, the whole of the alkaloids are left in a state of greater purity than I have ever obtained them by any other process.

#### Indirect Determination.

The benzoic solution is well shaken with 70 c.c. deci-normal sulphuric acid. The acid solution is drawn off and replaced by 30 c.c. water, which is again shaken and added to the other. The aqueous liquors are heated, and *accurately* neutralised by deci-normal solution of caustic soda until the colour of reddened litmus is affected by it. The quantity of soda solution required for saturation is now to be deducted from 70 c.c. (the equivalent of 70 c.c. deci-normal sulphuric acid), and the difference multiplied by ·031 ¶ is the weight of alkaloid in 20 grammes bark. This product multiplied by 5 gives the percentage.

*Example.*—Suppose the bark for analysis to contain 5 per cent. alkaloid—which would be a reasonable standard for pharmaceutical purposes—the acid solution from 20 grammes powder should be neutralised by, say, 37·5 c.c. soda solution :—

For  $70 - 37·5 \times ·031 \times 5 = 5·91$

(the number of grammes of alkaloid in 100 grammes bark).

I consider this indirect determination the most simple for those who are accustomed to work volumetric processes.

\* Although I am opposed to drying precipitates upon the filter, it is unavoidable in this case, because the moist cinchona red cannot be conveniently removed.

† A litre of benzol (boiling at from 85° to 120° C.) dissolves all the alkaloids of 20 grammes bark. By long standing, however, a slight separation of crystallised benzoate of alkaloid, chiefly cinchonine, may sometimes take place and affect the accuracy of the result. I, therefore, recommend that it should not be allowed to stand for more than 5 minutes. The benzol may be used repeatedly, without redistillation, and with but little loss.

‡ Whilst preparing this paper I found that the *succirubra* bark used in Bengal for the manufacture of cinchona febrifuge proved an exception to this rule; for, although the whole of the alkaloids are at first dissolved by the ether, a separation of small crystals of cinchonine quickly followed to the extent of 0·17 gramme. I attribute this to the large proportion of cinchonine contained in this bark, which I have found to amount to as much as 49·3 per cent. of the total alkaloids.

§ This brown substance, *which is not alkaloid*, is the reason why analyses of bark, in which chloroform is the solvent, yield an apparent higher percentage of alkaloids.

¶ 0·031 gramme is the weight of alkaloid corresponding to 1 c.c. of a deci-normal solution. The molecular weight of the mixed alkaloids of cinchona bark being, as previously stated, 310.

In concluding this paper it is satisfactory to me to be able to state that another chemist, very experienced in the analysis of cinchona bark, confirms the practicability of extracting the whole of the alkaloids by hydrochloric acid as effectually as by any other process. Mr. A. Kissel, chemical assistant to Dr. G. Kerner, in Zimmer's quinine manufactory, has kindly sent me the following results of analyses performed by him on the same bark powder by the several processes indicated, viz. :—

	Lime and Alcohol Process	Lime and Oil Process	Hydrochloric Acid Process
Quinine .. ..	1·805	1·798	1·802
Quinidine .. ..	0·358	0·347	0·351
Cinchonidine .. ..	0·333	0·343	0·335
Amorphous .. ..	1·873	1·867	1·874
Total .. ..	4·374	4·355	4·362

I therefore consider that the extraction of alkaloids from cinchona bark by hydrochloric acid, as applied to the manufacture of the cinchona febrifuge in Bengal, provided it is properly performed, is not a wasteful, but, on the contrary, an economic and efficient process. It is, moreover (with the exception of an unpublished process, the private property of my friend, Dr. G. Kerner, which I am not at liberty to make known), the only process that can be profitably applied *in the tropics* to the manufacture of the total cinchona alkaloids.

#### A PHARMACIST'S NOTE-BOOK.

##### GUM ARABIC.

MARIE ANTOINETTE having observed to her milliner that some trimming then fashionable had been worn by her great-grandmother, "Majesté," replied the dressmaker, "il n'y a rien de nouveau que ce qui est oublié." Now, we cannot exactly say, in chemistry, that there is nothing "new" but that which is forgotten, nevertheless it is often very advantageous to spend a few days over old collections of chemical observations. It is not well to despise a work or a journal because it happens to be dated twenty or thirty years back. On the contrary, it is a new work or a new observation, which has not had the sanction of time and corroboration that most frequently requires to be received with caution.

The recent war in the Soudan has caused stocks of gum arabic to run low, and whilst the Nile Expedition was being organised a Dutch physician was making some curious observations on the production of gum by the cherry-trees in his little garden. He became convinced that the production of gum is not a normal physiological function, but the result of disease, as was asserted by writers a hundred years ago. He added, however, that this disease can be induced, or inoculated, upon other trees of the same kind. In fact, there would appear to be some peculiar bacterium which exists where gum is produced, so that if a small fragment of this product be placed in the bark of a perfectly healthy tree, it will, in course of time, induce the production of gum at that spot.

This would prove a very useful observation from a practical point of view, if, after such inoculation, the bark of a tree could be made to yield gum rapidly. The observation is yet little more than a twelvemonth old, and it is already attacked and criticised. Some American journals treat it as a joke, and a Belgian medical paper endeavours to show that the production of gum in the bark of trees is not a disease, but a natural function! Although none of these critics have made any experiments themselves upon the subject, their flowing language and irresistible arguments shake one's confidence, and we await further evidence, whilst still leaning strongly towards the bacterium theory. In the meantime, now that the British troops have gone northwards, perhaps the Soudanese will abandon their spears and guns, and look to their acacias.



## HYDROQUINON.

Three months ago our worthy friend, Mr. Brown, who is the fortunate owner of a large pharmaceutical establishment not a hundred miles from Buckingham Palace, was asked to supply a customer with hydroquinon—"not as a medicine, but for photographic purposes," it was intimated, and the writer of the order added, "If this substance is on the list of poisons, I will sign for it."

Now Mr. Brown did not remember having ever heard of hydroquinon, and, as we explained to him, this was natural enough, since that substance was not known when he passed his examination. It is even now a somewhat rare "chemical product," but nevertheless has been recently prepared as an advantageous substitute for pyrogallie acid in the development of the rapid gelatine plates now so extensively used both by amateur and professional photographers. The latter gentlemen seem to get on very well indeed with pyrogallie acid, but in the hands of amateurs hydroquinon is said to be preferable, as its action is more under control.

At the present moment there is no easy and economical method by which hydroquinon, or even quinon (from which it can be made), can be obtained. But we, who passed our examination long after Mr. Brown, have a note in our book to the effect that the most direct manner of preparing hydroquinon is by oxidising oxyphenylamine. This is effected by means of bichromate of potash and sulphuric acid. But where do you get the oxyphenylamine? someone may ask. This substance is easily produced by the reduction of mono-nitro-phenol. And this substance? inquires another. The starting-point, mono-nitro-phenol, is obtained by acting upon carbolic acid (phenol) by nitric acid with certain precautions which are indicated in the books. This would in all probability be the most economical method of obtaining hydroquinon.

## ALDEHYDE GREEN.

Photography has brought a quantity of useful chemical products into the market which were formerly quite unattainable. Photographic chemistry is a tiny world of its own; it has its snug little phraseology and its mysteries, and at the present day a photographic chemist considers himself quite on a par with a metallurgist, a pharmacist, or an analyst. Here is a little anecdote:—For some time past we have all seen occasionally a brilliant green colour known as "aldehyde green"; we believe that considerable fortunes have been made by it, though our note-book does not allude to that point. Now it appears that in 1861 a French gentleman, M. Larett, much interested in dyes, obtained a very beautiful blue by the action of ordinary aldehyde upon a solution of some salt of rosaniline in sulphuric acid. Magnificent as it was, the colour proved utterly useless, as nothing appeared capable of fixing it on the tissues. A chemist named Cherpin, was making vain efforts to fix this blue, when he happened to meet a friend—a photographer—to whom he told his deplorable story. "You cannot fix it!" exclaimed the latter; "why not try hyposulphite of soda; that is the substance we always use for fixing the photographic image?" Curious to relate, the chemist Cherpin (who ought to have known better) did try the salt mentioned by the photographer, and the result was that the blue colour was at once transformed into the magnificent aldehyde green dye—a most important discovery.

## RECTAL ALIMENTATION.

This important subject has attracted considerable attention of late years both among physicians and pharmacists. The administration of medicines by enema is a very old practice, but it is only within the last few years that experiments have been made with the view of keeping up the strength of a patient and saving his life by administering food in this manner when it cannot be taken by the mouth.

In Phipson's *Journal of Medicine*, vol. i., p. 194, there is a short note on the subject by Dr. Catillon. This physician fed two dogs for eight weeks with injections of raw eggs. The first dog, which had eggs only, lived with difficulty, and experienced considerable loss of weight. The second, which had eggs mixed with glycerine and pepsine, lived in an apparently normal manner, the weight and temperature of the animal remaining constant.

After a period of thirty-seven days the pepsine in the latter

case was stopped, when the dog soon lost weight, and his temperature fell from 102° to 99° Fahr.

It was concluded from this experiment that for nutrition to be properly performed by the intestine, digestive ferments must be associated with the food given, in order to assure the formation of peptones. This conclusion is borne out by administering peptones formed artificially.

Austin Flint has made some further observations. He mentions that nutrition was maintained in a number of patients from three weeks to five years; the majority of them were fed by rectal alimentation alone. The materials usually employed were milk, raw eggs, animal broths, &c. As early as 1872 Leube recommended beef muscle partially digested by an artificial process which brings it into a fluid condition, or sufficiently so to enable it to be administered by a syringe. In America desiccated blood, previously deprived of its fibrine, and afterwards carefully dried at a low temperature, has been sometimes used of late. It is said to be completely soluble in water below 100° Fahr. When required for use it is dissolved in the proportion of 1 drachm of the dry powder to 1 oz. of water.

The preparation and preservation of peptonised food of various kinds is daily receiving more and more attention from the practical pharmacist, and already occupies an important place in modern practice.

## THE CRAYONS OF VULPIUS.

The iodoform crayons of Vulpus appeared just at a time when several medical journals were raising an outcry against the abuse of iodoform powder. There is no doubt that this valuable medicament has been considerably abused, more particularly in Austria and in Great Britain, and several disastrous consequences have been made known. Nevertheless, when used with due care and with a proper knowledge of its anæsthetic and general therapeutic properties, it will long remain one of the most valuable agents of the Pharmacopœia. The crayons of Professor Vulpus were invented for the treatment of fistulous complaints. They are soft and flexible, and are obtained so as to enclose 50 per cent. of iodoform, by dissolving 15 grammes of best gelatine in 50 grammes of water and  $7\frac{1}{2}$  grammes of glycerine.

The solution is made by means of a water-bath, and when the subsequent evaporation has reduced the mixture to 54 grammes, the exact quantity of pure iodoform, namely 27 grammes, is added in the form of a fine powder. The mixture is well stirred to ensure thorough incorporation and to obtain a completely homogeneous mass, which is run, whilst warm, into a mould, such as is used for moulding crayons of lunar caustic.

To ensure complete success the mould must be slightly warm when it receives the mixture. Immediately afterwards it is cooled with ice-cold water. It is essential to cause the cooling to take place rapidly, so that the iodoform particles may not have time to fall to one side of the crayon—i.e. to the bottom of the mould. The little cylinders thus obtained are at once placed in a drying-closet, where they remain until they are reduced to two-thirds of their original weight.

## BROMHYDRATE OF MORPHINE.

Among the newer active medicaments which have found their way into therapeutics, either as granules or solutions for hypodermic injections, is bromhydrate of morphine. This salt is now delivered by manufacturers sometimes in the form of white crystalline needles, very well defined, and by others as a crystalline powder of a yellowish or greyish colour, and having somewhat of a resinous aspect. This variety does not become easily moistened with water when first applied. A French pharmacist, M. Patrouillard, says that latterly this second variety of the bromhydrate of morphine is most commonly met with in trade. It may answer well enough for converting into granules, as the product is perfectly pure, and we understand that bromhydrate of morphine and bromhydrate of cicutine are largely granulated in Paris.

But for the preparation of solutions for hypodermic injections it is better to use the former variety, which is devoid of resinous aspect and dissolves very readily in water.

"The preparation of solutions to be used as hypodermic injections," says M. Patrouillard, "is not so easy with the bromhydrate in the form of powder as with the crystalline salt, and this is supposed to be due to the resinous quality of



the former, or because it actually contains a small amount of some resinous substance."

For this reason he has sought a ready means of obtaining bromhydrate of morphine in a pure form, and after several trials has finally adopted as the best method that which was proposed in 1870 by M. Latour for the preparation of bromhydrate of quinine and bromhydrate of cinchonine.

The proportions to be used are: Sulphate of morphine, 40; alcohol (at 85°), 80; bromide of potassium, 2; and distilled water, 4 parts.

The sulphate is dissolved in the alcohol at ebullition, and into this solution is poured the bromide of potassium previously dissolved in the distilled water. The liquid is filtered to separate the sulphate of potash, and the filter washed several times with warm alcohol at 85° strength.

It appears that bromhydrate of morphine is much more soluble in alcohol than the corresponding hydrochlorate. The solution must therefore be evaporated on a water-bath, and it is only towards the end of the evaporation that it crystallises in silky masses of short needles, generally somewhat tinged with yellow. It is then redissolved in a very small quantity of boiling water, and, on cooling or by slow evaporation, this solution yields beautiful white crystalline needles about two-tenths of an inch in length.

### MELIORA.

BY JOSEPH INCE.

THERE comes a time, too well known to journalists, when there is nothing left to chronicle. The streams of pharmacy run dry, the doors of the learned societies are closed, and original research survives only in the attempt to discover some resort favourable to recreation. All men have their trials, and every wheel of fortune has its blanks—and surely the month of August confirms this truism most unpleasantly in the editorial mind. We wander to the Square, to find the professors gone, the students fled, and the decorator in full possession. Haply a stray analyst is at his post, beguiling his spare hours with the calumet of peace; and the library is under the univalent direction of an official with full leisure to reflect on the mutability of things human.

Elsewhere science takes a more practical view of life; there being no sheep, the shepherd has departed, and his crook is utilised in those peaks and passes which are essential to the health of some of our community. No man more richly deserves his holiday than the British pharmacist, seeing that no one is more entitled to the name of "the British workman."

The outside public little know the varied anxieties which the pursuit of pharmacy entails. The ordinary cares of business are weighted by ever-present responsibilities from which the very nature of the occupation prevents escape. One wonders sometimes that, in spite of actual risk and legal impediments, such eagerness should be displayed to crowd the ranks.

We believe that this is in part due to the difficulties which beset the entrance. The whole world may enter general trade without let or hindrance; those only duly qualified by personal study and by official sanction can practise this branch of the healing art.

In the inevitable pause of this autumn month we may congratulate pharmacists on the certain dawn of a better and more remunerative position than they have hitherto enjoyed. We want our junior members, our rising men, and specially those about to enter on their career, to see that, once let a pass qualification be abolished, and a compulsory, recognised system of training be adopted, the whole situation will be changed, as such, and in public estimation. On this point we desire to make two short observations:—

First, the members of the medical profession have for some years enjoyed the advantage of having their studies compul-

sorily spread out for a definite space of time. They cannot steam up the requisite, examination knowledge of anatomy, physiology, therapeutics, and clinical medicine under a supreme effort and high-pressure system. They are saved from that terrible infliction. In most cases (and we speak from knowledge of the subject) the examination, preliminary or final, is but the official sanction of work done. Why should the pharmacist consent to the misery of acquiring an accumulation of monotonous answers to questions asked, instead of pleasurably preparing himself for the duties of his future life by letting his knowledge be the result and reflection of his daily occupation and observation?

Secondly, our successful business men, who commercially and in point of scientific attainments stand in the foreground of pharmacy, have individually adopted the exact plan which of late has been so energetically proposed.

We turn to published records, and see there lists of unsuccessful and successful candidates. The order is correct. Occasionally the returns have been so disastrous that we have almost suspected a misprint.

Is it reasonable to suppose that the youth of pharmacy are preternaturally incapable and slow of understanding? The old system, born of necessity, was wrong. These students have learnt digests, tabulations, tips, and summaries; a few with stronger memories have ground through manuals and recollected lecture notes; but this huge and unenviable drudge-work has not been lightened by one ray of experience, or been made bright with feeling that they had the smallest comprehension what these stray chips of information meant.

The hour comes when this kind of knowledge must be tested: the test is applied, and there is a copious precipitate.

A theory has been advanced that essentially this is a good thing—pharmacy being overcrowded, any decrease in probable numbers should be reckoned an advantage.

It cannot be the object of a great Society to decimate its future members, and though out of evil good may come, an examiner would hardly like to be considered as an educational upas, nor does he hold office in order to effect the destruction of those who come within his reach. A great Society should foster and protect; it must act on high principles and leave consequences to shape themselves.

Two strong Associations, both maintained by the younger aspirants of pharmacy, have risen. Both aid the current literature of the day; both take their share in the more formal official meetings.

An older organisation, the British Pharmaceutical Conference, is chiefly supported by the same agency.

Professors and pharmacists of reputation can, and find it no dishonour to, associate with those whose lesser experience is but the consequence of fewer years. There is, therefore, no defect in the material, and heartily we congratulate the younger generation, that hereafter they may have an equal chance with others so far as the professional character of their studies is concerned.

We congratulate them also that their trade interests may advance simultaneously with their learning, practical and the retical. May they never know the weariness of mere manual, ignorant dealing in drugs and chemicals. May they never know the equal weariness of the mere *memoria technica* of science, learnt with convulsive effort, and forgotten when the object for the effort ceased.

Let the old bad system go: and let the new come in—with more solid grounds of hope, and with better promise.

We have already men of whom we and the world are proud, and we shall have a reasonable expectation that there never will be wanting others to follow their bright example and perpetuate the race.



## THE MINOR EXAMINATION.

BY A CANDIDATE IN JULY LAST.

ARRIVING at 17 Bloomsbury Square a short time before the hour fixed for the examination, so as to look over the specimens, one of the candidates cheered me by telling me that on the first day twenty-four had been examined, and that twenty-one had failed; also that plasters had been given.

Presently we were ordered into the chemical museum, names were called over, and after a little waiting we were sent upstairs. The first six were sent to dispensing, others distributed amongst the examiners, and the remaining four (of whom I was one) told to sit down.

At about 10.50 I was sent to *materia medica*, which was chiefly recognition. Among other drugs I was shown *colchicum* corms (asked preparations, and difference between corm and bulb), *belladonna* root, *calumba* (botanical name), *kino* (habitat, and parts used), *guaiaicum* resin (preparations, and the best solvent), *fennel* and *cumin* fruits (and how to distinguish them), *gentian* (botanical name, and asked what *lutea* meant; not being able to say, my examiner told me that if I found the derivation of the names, *materia medica* would be much easier. I suggested they were not always easy to find. He told me *lutea* meant yellow, as that *gentian* had yellow flowers, while most had blue), *henbane* and *belladonna* leaves, *scammony* root (asked if *scammonium* was obtained from the dried root, and how it was obtained), *hemlock* and *aniseed* fruits, *pellitory* (preparations), *saffron* (habitat; did it grow in England, or any plant like it? Was told *colchicum*), *aconitum napellus* and *Japanese aconite* (and the distinction between them), *nux vomica* (active principle), *fabia Ignatii*, *podophylli radix* (and how resin obtained), *taraxacum*, *arnica* (botanical name, habitat, preparations), *areca* (what active principle? Did not know any, and was told there was no definite alkaloid), *milk sugar* (how obtained; what was milk composed of; how was the casein removed), *quercus*, *krameria*, *jalap*, *benzoin*. That finished *materia medica*, and I was satisfied, only having missed *acorus calamus*.

PHARMACY, 11.15 TO 11.30.—Asked for a definition.

*Aqua Lavrocerasi* given to recognise. Told the examiner that with me the sense of smell was not very acute; he admitted it varied very much, but said a chemist should cultivate it. I suggested it was *ess. anisi*. He then told me what it was; asked how it was made, why macerated, why it looked milky, what decomposition took place, how much HCN it contained. I said it was very variable, but he asked about how much. I was thinking of *ol. amygd. essent.*, and said  $\frac{1}{2}$  per cent. He said that was a great deal, but I did not guess again.

*Sp. Etheris Nitrosi*.—Recognised. How prepared? distilled at what temperature? Told him  $60^{\circ}$  to  $70^{\circ}$ . He asked me what the temperature of the room was. I told him about  $70^{\circ}$  Fahr., but I meant  $70^{\circ}$  C. as the distilling temperature. He asked me what that would be Fahrenheit. I said about  $150^{\circ}$  Fahr.; he said that would be about right. He asked what reactions took place; what was the use of the  $H_2SO_4$ , what was its sp. gr., and what the weight of 16 fl. oz.; which I calculated.

*Alcohol*.—Chemical nature, how prepared, what caused change, what reactions, how much in rectified and in proof spirits.

Shown *Acetic* and *Sulphurous Acids*; asked how the latter was prepared, and what percentage and decompositions.

*Liq. Hydrarg. Perchlor.*—Strength; what use was the ammon. chlor.; what decomposition might take place. Said suboxide. He asked me what colour the deposit was, and then I told him *calomel* and *chlorine* would be produced.

*Lotio Nigra* to recognise; how made, what chemical decomposition, how detect  $CaCl_2$  in the filtered liquor.

He had the four B.P. suppositories, and showed me *plumbi cum opio* and *acid tannic*, and asked the strength.

*Glycerine* shown; asked how I knew it from syrup, how it was made, what its chemical nature was, what decomposition occurred in making it. I gave him the three ways. Also asked the chemical nature of fats.

DISPENSING, 12.15 TO 1.—Examiner, Mr. Greenish, who gave me the following prescription:—

Pulv. rhei	..	..	..	..	..	gr. ij.
Creasoti	..	..	..	..	..	℥ j.
Sapo	..	..	..	..	..	gr. j.

M. Ft. pill. Mitte octo. Cap j. ter die dum opus sit (post cibos).

P. cret. aromat.	..	..	..	..	3 j.
Rhei	..	..	..	..	gr. xl.
Mucil. tragac.	..	..	..	..	3 j.
Aque ad	..	..	..	..	3 iv.

M. Ft. mist. Capiat 4ta part pro dosis s. o. s.

The pills made all right, as the soap ordered was sufficient. Examiner asked if I had dropped the creasote, but made no remark when I told him I had.

The pulv. rhei was rather lumpy for the mixture, so I rubbed it dry with the p. cret. arom. in a mortar, and turned it out on a piece of paper while I made the mucilage, which I put in the bottle, and then rubbed up the powders with water, and used an iron knife, not thinking of the rhei till I noticed it darkening as I scraped the pestle; then I quickly replaced it by a bone knife, but rather in fear lest the examiner had seen it, or that it had darkened the mixture; but it seemed all right, so finished it off, and was just going to give it to him when I remembered I had not read over my label, and turned to the desk behind, undid it, and found I had put "three times a day" on the mixture as well as on the pill label. It was very quickly removed and replaced by another without my examiner seeing it, as he was busy finding fault with my neighbour for not making a satisfactory emulsion. When he told me I might sit down I felt relieved.

PRESCRIPTION-READING, 1.15 TO 1.30, MR. BENDER.—Had about a dozen prescriptions to read, some into full Latin. Was asked what pulv. Jacobi was, and its common name. There were several plasters to be applied to various parts. Did not know what "sterno" meant, and was told to look it out when I got home. Was asked the common name of *pruni virgin*; could not think of it, so said "Virginian prune." Several doses of strong remedies were asked (some of them twice over), as *morphia mur.*, *liq. morphia*, *vin. colchici*, *tinct. nucis vom.*, *acid. hydrocy. dil.* (strength, and if there was another), *acid. carbolic*, *antim. tart.* (which I said was 5 grains). Then I was told to put the following into full Latin:—

Take					
Solution of acetate of ammonia	..	..	..	14 oz.	
Sweet spirits of nitre	..	..	..	30 minims	
Syrup of saffron	..	..	..	20 "	
Water to	..	..	..	4 oz.	

Mix, and make a draught. Half to be taken to-night at bedtime.

BOTANY, 2.15 TO 2.30, MR. CORDER.—Was shown the three stems of di-, mono-, and a-cotyledons, and asked the difference in germination, and if dicotyledons ever had adventitious roots, and an example; also if monocotyledons ever had true roots.

Not being afraid of botany, I was rather careless when shown some flowers and asked what class they belonged to. One was small, and appeared to have a united corolla, so I said "Corollifloræ." Asked why I said so, and told to prove it by opening, which I did, and found it belonged to *Calycifloræ*. Another was a red flower, which I said was *thalamiflorous*; he then showed me one with the petals removed, and having the stamens on the calyx. The third looked very much like a pea, so I said "Calycifloræ"; he took hold of the corolla, when, to my disgust, it all came off in a piece, and I was told to be more careful in examining flowers. I had to recognise *dulcamara*, *conium*, *brassica alba*, and *papaver rhæas*. Was asked about the sepals and fruit of the latter, and told to define a capsule. Was then given an *epilobium* and told to describe it in full. This just suited me, but when I had only got to the corolla was asked what sort of a fruit it was. I answered, "A capsule." The examiner said that was right, and that capsules had very various forms. I then told him that our Professor had informed us that "Everything was a capsule that was nothing else," at which he laughed, and, after a little talk, he told me he had done with me.

CHEMISTRY, 2.45 TO 3.15.—First, I was shown a row of bottles, and asked what they were. I knew  $KClO_3$ ,  $PbO_2$ ,



$\text{HgI}_2$ ,  $\text{CuSO}_4$ ,  $5\text{H}_2\text{O}$ , and there was a manganese salt, probably sulphate.

Next, I had given me a coarse yellowish powder, which I had called "litharge," and was told to test if it was so. I found it was precipitated  $\text{HgO}$ , and had to give equations for the reactions in testing for and preparing it. *Iodide of Potassium*.—How prepared, equations, how much from 100 lbs. iodine. *Mercuric Oxide*.—How prepared from  $\text{Hg}$ , equations, how much from 100 lbs.  $\text{Hg}$ . *Chlorine*.—How made, with equation. *Ferric Chloride*.—How made, equations. *Sodium Carbonate*.—Salt-cake and ammonia-soda processes, and equations. *Reduced Iron*.—How made, what percentage of impurity was allowed. Equation for the action of  $\text{HNO}_3$  on  $\text{Fe}$ . What happened if marble was added to  $\text{HCl}$  and then  $\text{Na}_2\text{CO}_3$ . Then asked a few questions on specific gravities. What specific gravity of substance weighing 100 in air and 75 in water; of liquid weighing 1,820 grains in 1,000-grain flask; of liquid weighing 180 grains in 250-grain flask, and what the liquid was.

This finished the day's proceedings, and next day I heard I had passed.

NEMO.

### The Minor Examination.

#### To the Chemist and Druggist—

SIR,—Please allow me to enter a very strong protest against the concluding remarks of "A Recent Graduate," published in your last number.

Passing over his questions with the remark that I should very much like to hear the answer given to one or two of them, I beg to say that I consider his concluding remarks, concerning the cause of failure, simply concentrated humbug. Many students—perhaps 20 per cent., but certainly not more—may be "lively members," but to say that the general cause of failure is due to idleness, carelessness, and theatre-going, is simply nonsense. I feel that I am in a position to speak with a certain amount of freedom on this subject, as I have passed the Minor, and, what is more, passed at my first attempt; but the more I see of students and the examinations the more thankful I feel that I am qualified. The examinations as at present conducted are little better than a farce, and the best man has a precious little better chance than the collected last-few-days-crammed idler. Perhaps, however, individual instances will illustrate better than general statements.

When I was studying for my Minor I was very friendly with a fellow I happened to meet in town, and we studied mostly together. He was tall, gentlemanly, and very quiet. Now, sir, this gentleman had worked for years before coming to town, and then after arriving in London studied hard and conscientiously for six months, at the end of which time he was very well up. I have often questioned him for hours without tripping him, as long as the questions were anything approaching reasonable or fair, while his dispensing and analytical work were singularly good. We presented ourselves on the same day. Result—I passed, *he failed*, plucked by a very noted examiner in prescription-reading, over a prescription, according to his statement, utterly illegible. He started working again, and again presented himself, only to be plucked once more, in the same subject, and *over the same prescription*. Comment on this case is needless. Another case I know equally hard. A young fellow came up to town as I passed, and, as I have an out-door berth in London, I see him almost daily. He was short, wore spectacles, and had a very young look; but, as for work, I think, without exception, he was the hardest working student I ever knew. Morning, noon, and night, he was never idle, and you might as well have tried to get Cleopatra's needle to a theatre as him; but, on returning home myself between twelve and one, I have often seen his light burning, telling the tale of the quiet little worker within. He presented himself and *failed*; again presented himself, and *failed*. Both these men I know, and see very often; they are still working, but one who has passed through it can best imagine their feelings.

On the other hand, I have known a fellow come to town for eight weeks, boast that he did not know what  $\text{H}_2\text{O}$  meant, cram and drink alternately, go in, and pass. I have seen students gather round the board and watched the utterly

incredulous look they unconsciously adopted as the name of some utter duffer whom any one present would have bet twenty to one against was written among the successful, while a moment after the same faces would lengthen with honest disappointment to see the name of some splendid man conspicuous only by its absence.

These are not imaginary pictures: they are drawn from real life, and the originals could at any time be produced, and I trust that, if any other gentleman is tempted to write in such a remarkably, self-satisfied and assured vein, he may reflect a little on the pain and differences with parents his decidedly questionable remarks may cause.

Your obedient servant,

KALEIDOSCOPE.

SIR,—It would be scarcely fair to let the letter by "A Recent Graduate" in your last issue pass without comment. I have no doubt whatever that this man is clever—very clever, in fact—and I should not be at all surprised if he knew it; for, having written two columns about himself and what he has done, to say the least of it, that must be about as near to a case of egotism as any I ever heard of. He finishes up his epistle (which should have been headed "Ego") with the prayer of the Pharisee, thanking God that he is not as other men are—theatre-goers, winebibbers, and idlers.

But I should like to tell this "Daniel come to judgment" that I have known of hundreds and hundreds of men (and what student does not?) who have worked hard and consistently, and have been considered by tutor and fellow-students to be exceptionally well up. These men have presented themselves at the Square simply to be ploughed, and not only once, but after another three months' hard reading again having the same fate, and even *ad vices tres*, or more. In fact, it is quite recognised among students that those who are well up will be "ploughed." And I have also known fellows who literally knew nothing present themselves successfully. One case in particular. A man came knowing hardly anything, and he did not touch a test-tube the whole time he was at college; but, after six weeks' half work and half play, he thought, to use his own words, "he would have a 'shy.'" He did, and the "shy" proved successful, while many a fellow who, in the way of knowledge, could have swallowed him, like the traditional fat and lean kine we read of in the Scriptures, had to suffer defeat.

The man who can explain such incongruities as the following might be able to do anything—even pass the Minor at his first attempt:—

The silver medallist under Professor Attfield at the Square school got "ploughed" for chemistry.

Two medallists from another college shared the same fate.

Supposing this recent graduate had had for his first subject some unintelligible prescription to read, and, not being either Maskelyne or Cook, could not read it, I wonder what his three months' reading and five days' hard work would have availed him then; or, supposing he had got some mess in dispensing to make presentable according to his particular examiner's particular idea, and he had made it up according to his own idea, I fancy the readers of THE CHEMIST AND DRUGGIST would have missed this literary treat written by his pen.

Or, taking it that he was a very nervous fellow instead of a very cool one as he appears to be, and the examiner's first question or two being stickers, making him, of course, more nervous still, supposing him to have had anything of an examination, the probability is that he would have to have taken "Labor omnia vincit" for his motto, and gone down for another three months' reading, when perhaps he would have tried again; and fancy what an effect that would have had on the circulation of the next edition of THE CHEMIST AND DRUGGIST! But, as it was, he happened to have questions that suited him, and he got through.

Does this gentleman mean to tell me that, in the June examination, out of the fifty-two who presented themselves, there were only twelve who had worked hard and had not been to theatres and who deserved to pass? I should not mind backing half those who failed for any monetary consideration to beat this recent graduate in an exhaustive examination where all had the same questions.

I should like to know if any examination in the world of



about the same standard could show the same results as the last July for instance.

Twenty-four presented themselves, twenty-one failed.

Every student who has had any experience of the examinations, even if he has not been up, looks upon them simply as a toss-up, and none present themselves, however well up, with any feeling of certainty; he only hopes the toss may be in his favour.

The fact is the whole thing is on a wrong basis. To each examiner every examination brings him more "siller," while almost every one of them is in business himself, so that it must be to his interest to keep as many out as possible. Let me conclude by saying that this is written with no bias whatever, as I myself have passed, and the friend who is writing this letter with me passed at his first attempt. But from the experience we have had in seeing scores of fellows go up, we, with hundreds of others, say that the Minor examination is a deception and a snare, and simply a case of pot-luck, and the man who says it is not deceives himself, and the truth is not in him.

ONE OF THE FIVE HUNDRED.

### A FATAL PRESCRIPTION.

ON July 16 Dr. Danford Thomas held an inquiry, extending over three hours, relating to the death of an infant, aged eight months, named Percy Wallace Smith, son of William Smith, newsagent, of 2A Chapel Street, Marylebone.

The mother of the child, who was in court, was so deeply affected that she had to leave, the Coroner expressing a hope that because of her distressed state her evidence would not be required.

William Smith, the father, stated the deceased child had excellent health. It had been suffering a little from teething, and as it cried a deal last Saturday and Sunday morning, his wife sent him for Dr. Freeman. The doctor was from home, and Dr. O'Brien came on his behalf. He felt the child's gums, and suggested lancing, but witness would not agree to that. He then wrote a prescription, and told witness to take it to the chemist's. The prescription was handed in as follows:—

"Pot. bromid	..	..	..	..	..	1 drachm
Ext. con.	..	..	..	..	..	1 drachm
Aq. chloroform	..	..	..	..	..	1½ oz.

"One tablespoonful every four hours if he is not sleepy.  
"RUSSELL O'BRIEN."

Witness went a little after seven o'clock on Sunday evening to Mr. Boothby, chemist, of Crawford Street, for the medicine. Mr. Boothby asked what the child was suffering from that a tablespoonful every four hours should be prescribed. He said that Dr. O'Brien must have made a mistake, and written tablespoonful for teaspoonful, and advised witness not to give the child more than a teaspoonful every four hours. Witness went home, and about eight o'clock administered a teaspoonful of the mixture to the child. At nine he and his wife went to bed. The child was whining then. About 25 minutes to 12 he was woke up by his wife, who said she thought the infant had a fit. He got out of bed and went at once for Dr. Freeman. The doctor came and saw the child. He saw the prescription, and struck his head, and ordered them not to give the child any more of the mixture. The doctor stopped some time, and when he left he told them to sit up all night and watch the child. As the child was turning black he went again for Dr. Freeman, who came, but the child died shortly after, about 3.30 on Monday morning. His wife said, "My God! the child's poisoned, I believe." This was directly after they gave it the mixture.

Dr. Pepper (who had, by instructions from the Coroner, analysed the mixture and performed the post-mortem) asked witness if the child was sick after taking the medicine. The witness answered, "No; it pulled itself about in all manner of ways."

Dr. Delamark Freeman, of 218 Marylebone Road, stated that Dr. O'Brien acted for him during his absence; he had every confidence in him. After Mr. Smith called he went round to his house, but could not get in, so he went to Dr. O'Brien's and asked him what was the matter with the child. He told him there was nothing serious, and he had prescribed. Witness then went home. About 11.30 Mr. Smith came for

him, and he went at once. He found the child perfectly livid, and hardly able to breathe. He applied mustard poultices, but without effect. The child was in a state of coma, and he tried to rouse it. He smelt the mixture, and perceived there had been a mistake in the prescription. Seeing it was a hopeless case he left, telling them to watch the child. Mr. Smith came for him later on, and he went to the house. The child died shortly after his arrival. Mr. O'Brien told him he had made a mistake in the prescription. This mistake was in ordering extract of conium, instead of the tincture.

Coroner: Then there were two mistakes. First in ordering the extract, and second in prescribing a tablespoonful instead of a teaspoonful.

Witness: Had no doubt the child died from an overdose of hemlock. There was no disease. Mr. O'Brien led him to believe that it was the tincture of conium, and not the extract, he had ordered. The instant he saw the prescription he recognised the mistake. There would be five grains to each dose—enough to kill a child eight months old.

The father, in answer to Dr. Pepper, said the child took no food after the medicine; it had a bottle of milk before.

Mr. H. N. Boothby, chemist, Crawford Street, stated he had been in business there 40 years. On Sunday night Mr. Smith came with the prescription, asking it to be made up. He thought the prescription an extraordinary one, as it was unwieldy, therefore he took particular care in making it up. He told Mr. Smith that the prescription was a strong one, and that whatever he did to give a very small quantity. There must have been some mistake, he told the father, in prescribing a tablespoonful every four hours; a teaspoonful was probably meant.

In answer to the Coroner, witness said that when he suspected a mistake he either refused the order or sent back for instructions to the doctor signing. He did not like the look of the prescription (it was written in pencil), so he took his glass and examined it minutely. If it had been the tincture or succus of conium, instead of extract, he would not have troubled about examining the prescription closely. If he had known Dr. Freeman was attending the child he would have called upon him, but he did not know where Dr. O'Brien lived. A teaspoonful of the mixture would contain five grains of conium. He should not like to give that quantity to a child eight months old; but he did not know the age of the child, and did not think that five grains, although a large dose, would prove fatal. The teaspoonful for a dose was only a suggestion.

The Coroner thought that Mr. Boothby had told them very honestly what he had done in the matter.

The Coroner then called Dr. O'Brien, and asked him, as he was in a measure implicated in the death of the child, whether he cared to give evidence.

Dr. O'Brien: Certainly.

Dr. Russell James O'Brien, B.A., said he had been practising in the neighbourhood for three years, and had previously been connected with the Western General Dispensary. He was called on Sunday last to see the child. When he arrived he found the child in convulsions. In the symptoms he apprehended inflammation of the brain from teething. He suggested lancing the gums, but this was objected to. He then prescribed. The prescription produced was his. Was not in a hurry at the time he wrote it. He certainly made a mistake in writing tablespoonful for teaspoonful, but the father was speaking to him at the time, hence the error. He had consulted several high authorities (Drs. Ferrier, Harley, and Brunton), and they agreed with him in prescribing extract of conium, because it was more reliable than tincture and not more powerful; besides, there was less uncertainty in its action. The authorities he mentioned considered five grains a proper dose. He was of opinion the child died of convulsions when teething. Five grains of extract would not kill it, nor forty grains. He admitted having made a mistake in writing extract for succus, but he did not believe this had anything to do with death. He had often given five-grain doses of conium to children with whooping-cough with good effect.

In answer to Dr. Pepper, Dr. Freeman said the child was not in convulsions, but jerked its arms about. The legs were paralysed.

Dr. A. J. Pepper, Examiner in Medicine to the London University, who had made the post-mortem, stated that the bromide would not have been dangerous and the chloroform water was of no importance; but with regard to the conium



the official dose, as laid down by the British Pharmacopœia, was six grains maximum for an adult, and for a child a year old one twelfth of that, so that the deceased had about ten or twelve times too much. The post-mortem showed extensive effusion on the brain, and the immediate cause of death was asphyxia, but he could not tell how the difficulty in breathing came about. It was evident from the examination that the child did not die from convulsions.

The Coroner thought the evidence was conclusive that the child had died from an overdose of hemlock (conium), and the jury said they had no doubt whatever on that point.

The Coroner then carefully reviewed the whole of the evidence, explained the law, and left it for the jury to say whether the death was from misadventure or accidental causes, or whether there was anything which amounted to a criminal charge.

The jury, after a long deliberation, returned the following special verdict:—"That the said Percy Wallace Smith died from the mortal effects of asphyxia when suffering from an overdose of hemlock, administered in a mixture prescribed to the deceased by the medical assistant of Dr. Freeman, and the jury is of opinion that the said medical man should be severely cautioned as to his negligence and carelessness in writing the prescription in question; the jury further consider that the chemist, when he discovered the error, should have refused to dispense the medicine, and when he knew it contained a dangerous dose to have communicated with the prescriber."

The Coroner called Dr. O'Brien and Mr. Boothby forward and addressed those gentlemen. He told Mr. O'Brien he had been requested by the jury to caution him about what almost amounted to culpable negligence, and enforced the necessity of the utmost caution in writing prescriptions. The jury had carefully considered the whole matter, and thought he should be censured very severely for making the errors he did. He (the Coroner) had no wish to go to extremes, but he hoped it would be a lesson to him for the rest of his life. As for Mr. Boothby, the jury thought that when he discovered the errors in the prescription, which he evidently did, it would have been wiser and better to have refused the prescription altogether.

The long and painful inquiry then ended, the Coroner and jury expressing commiseration with the parents at the loss of so fine a child under such sad circumstances.

#### ANTI-CHOLERA INOCULATION.

[N the current number of the *Nineteenth Century*, Dr.

Cameron, M.P., reviews the evidence regarding Ferran's discovery of anti-cholera inoculation. The main evidence is taken from a report issued by the medical Corps of Alcira on the results obtained in that town published in *Le Temps* of June 27, and attested by eleven signatures. The official census of inhabitants is 16,000. From May 1 to May 31, 7,043, or 4.01 per cent., had been inoculated, and 4,117, or 25.73 per cent. re-inoculated. Of the uninoculated 121 were attacked, 9 recovered, 15 remained under treatment, and 57 died. Of the inoculated 14 were attacked, 10 recovered, 1 remained under treatment, and 3 died. Of the re-inoculated 9 were attacked, 8 recovered, 1 remained under treatment, and none died. In no case did an inoculated person die after the fifth day. From June 1 to June 17, 8,874 were reported as inoculated, or 55.46 per cent.; and 5,210 as re-inoculated, or 25.66 per cent. Of the uninoculated 15 remained under treatment from May, 71 were attacked, 26 recovered, 15 remained under treatment, and 45 died. Of the inoculated remained under treatment from May, 10 were attacked, recovered, 2 died (one within the fifth day), and 1 remained under treatment. Of the re-inoculated 8 were attacked, recovered, and 1 died.

The reports do not show if the re-inoculated were included in the inoculated cases. To assume that they were not could be enormously more favourable to Dr. Ferran. Dr. Cameron therefore assumes that they were, in order to understate rather than overstate the case. We have, then, these facts, that in the town of Alcira, with 16,000 inhabitants,

built on an island and thus isolated by the river, half the population were inoculated. The two equal batches consorted together for precisely the same time, under precisely the same conditions, and exposed to precisely the same exciting causes of disease. In the 8,042 persons (which is the mean number not inoculated) there were 71 attacked, and 45 who died. In the 7,958 cases the mean number of inoculated, including the re-inoculated, 18 were attacked and two died, eliminating from the last number those who died before the fifth day after inoculation.

In other words, one case of cholera occurred in every 113 persons among the uninoculated population, and one in every 442 in the inoculated, or four times as few in proportion. Among the uninoculated persons attacked two out of every three died, among the inoculated but two out of eighteen, or six times as few. Among the uninoculated population one person in every 179 died of cholera, among the inoculated but one in 3,979, or a proportion smaller by 22½ times.

The reason for excluding from the deaths of inoculated persons those who were inoculated less than five days before death is that the virus takes that period to produce its effect.

These results are confirmed by those stated by Dr. Palido, of Madrid, who gives correspondingly significant figures regarding 1,851 cases; by Drs. Galvan, Licrandi, and Hernandez, of Benifayo, and Dr. Segui, of Cheste; by the Medical Commission named by the Provincial Representatives of Albacete; and by the Commission of the Barcelona Academy of Medicine, which investigated the experiments on animals.

The virus used for inoculation depends for its existence on another discovery of Dr. Ferran. Dr. Koch announced that he had discovered in the *comma bacillus* the cause of cholera, but he failed to induce it to form spores when in India, and to produce the disease by injecting it into the bodies of animals. Then Dr. Klein swallowed a considerable quantity, and, being none the worse, was supposed to have disproved Koch's theories. But in Europe Koch himself, Nicati and Rietsch of Marseilles, Van Ermengen of Brussels, Doyen and Babes of Paris, and many others in Italy and elsewhere have produced fatal cholera in guinea-pigs by the injection of a hundredth part of a drop of fluid impregnated with the microbe. Dr. Bochartaine, repeating in Paris Klein's experiment, found himself seized with sleeplessness, nausea, and slight convulsions. The next and most important step is due to Dr. Ferran, who, by cultivating the bacillus in two special media—first at a high temperature, then at a lower one—found that it developed spores. These have a very much greater vitality than the adult form. They are not destroyed by the acids of the stomach, so that they reach the intestines, which form the home of the adult. They resist the action of the grosser microbes of sewage, which destroy the latter. From the spore issues an intermediate form, which flourishes in conditions in which the *comma bacillus* would die. It is a cultivation of this form unattenuated which is used for inoculation. When injected into cellular tissue it is capable of but a languid existence.

The method of protective inoculation first practised by Dr. Ferran was to inject a cubic centimetre ( $\frac{1}{8}$  cubic inch) in two equal portions into the cellular tissue of the arms. At the seats of inoculation severe pain was experienced, with heat and swelling, lasting from two to eight days before all uneasiness disappeared, but uniformly subsiding without suppuration. The constitutional symptoms varied, but were sometimes alarming, comprising marked depression of temperature, lividity, cramps, and other symptoms of choleraic collapse, and followed by reaction, from which in the course of a day or two, and without any treatment, the patient recovered. Subsequently Dr. Ferran had recourse to what the Commissioners call the "gradual method" of inoculation. This consists of the injection of two drops of the vaccine into each arm, followed in eight days by the injection of twice that amount. With this procedure the general symptoms are insignificant or nil, and the local pain, though severe for a short time, rapidly disappears, and on the occasion of the second inoculation there are no general symptoms and little local inconvenience.

Altogether it is clear that a very strong case for investigation has been made out, and the British Government will be very remiss if it fails to take steps to give the theory a fair trial in case cholera should reach these shores.



## PRECAUTIONS AGAINST CHOLERA.

THE Local Government Board have published various memoranda of advice to public bodies, householders, &c., giving the precautions to be observed against cholera. Keep yourself and your house clean, and keep out of dirty places, is a short summary of this advice.

The basis of the publications is a memorandum drawn up in July 1883 by Dr. George Buchanan, Medical Officer of the Local Government Board, and printed with the title, "Precautions against the Infection of Cholera." This is printed in the form of a pamphlet for distribution, and is sold at 5s. a hundred or 30s. a thousand. A brief summary of this report is published as a handbill at 7s. 6d. a thousand; as a card, with tape for hanging up, at 25s. a thousand; and as a large placard for posting, at 6s. a hundred or 40s. a thousand. A pamphlet, entitled "How to meet Cholera: a Handbook for Sanitary Authorities, Medical Officers of Health, Inspectors of Nuisances, and others concerned in Sanitary Work, as well as Householders," costs 5s. a dozen copies, 35s. a hundred. It contains the various orders and circulars in regard to cholera which have been issued by the Local Government Board during the present year, together with other official memoranda bearing on the subject, and a short summary of the legislative provisions designed to check the spread of infection. These different publications can be obtained of Knight & Co., 90 Fleet Street; Shaw & Sons, Fetter Lane; Hadden, Best & Co., West Harding Street, Fetter Lane; and P. S. King & Son, Canada Building, Westminster, S.W.

## PRECAUTIONS AGAINST CHOLERA.

Taken from the Official Memorandum, July 13, 1883.

*Cholera in England, 'unlike small pox or scarlatina, is so little contagious, that if reasonable care be taken, there is scarcely any risk to those who attend upon the sick; the infection lies in the discharges from the stomach and bowels of the patient.*

## STEPS TO BE TAKEN.

1. To take care that all discharges which are diarrhoeal or choleraic are immediately disinfected and dealt with in such a manner that they cannot possibly get access to wells, cisterns, or other sources of water-supply.
2. To take care that all infected bedding, clothing, towels, &c., are thoroughly disinfected or destroyed, and not sent to the wash in an infected state.
3. To take care that no unhealthy conditions are allowed to exist.

## THINGS TO BE AVOIDED.

1. The use of drinking-water which is contaminated or even in the slightest degree tainted by sewer-gas, house-refuse, or other like kinds of filth, for example, by outflow, leakage, or filtration from sewers, house-drains, privies, cess-pools, foul ditches, or the like, into springs, streams, wells, cisterns, or reservoirs from which the supply of water is drawn, or into the soil in which the wells are situate.
2. The breathing of air which is foul with effluvia from similar sorts of impurity.

## PRECAUTIONS TO BE TAKEN.

To make immediate and searching examination of sources of water-supply, where the source is in any degree open to suspicion. This applies as much to the well or cistern on private premises as to the works and mains of water companies and Local Boards. All cisterns should be cleaned, and any connection of water pipes with drains should be severed.

Where pollution is discovered everything practicable should be done to prevent the pollution, and until that object is attained the water should not be drunk.

There should be at once a thorough removal of all kinds of house refuse and other filth which has accumulated in neglected places. Future accumulations of filth should be prevented.

Attention should be given to all defects of house-drains and sinks through which offensive smells are let into a house.

Thorough and constant wasbing and lime-whiting of uncleanly premises, especially of such as are densely occupied.

Disinfection should be freely and very frequently employed in, around, and about houses wherever there are receptacles or conduits of filth, and wherever there is filth, sodden earth, or anything else tending to make the atmosphere foul.

The duty of observing the above precautions is one which ought never to be neglected by anyone.

*But the main object must be to insure such sanitary conditions that choleraic contagion, even without disinfection, shall be unable to act extensively on the population.*

The existence of any nuisance should be immediately brought to the notice of the proper local authority.

Do not neglect diarrhoea.

From the larger pamphlet we take the following paragraphs:—

## DISINFECTION.

For artificial disinfection on a large scale, *the agents which most commonly prove useful are*—quick-lime, chloride of lime, carbolic acid, sulphate of iron, perchloride of iron, and chloride of manganese. The following are also efficient disinfectants, but, as being dearer, are less suited for large operations:—Sulphate of zinc, chloride of zinc, chloride of soda, and permanganate of potash. In certain cases chlorine gas, or nitrous acid gas, or sulphurous acid gas, may advantageously be used; and in certain other cases powdered charcoal or fresh dry earth.

*Quick-lime* ought to have been recently burnt, and may be used either in the form of a dry powder or stirred up with about ten times its bulk of water, as milk of lime. *Chloride of lime* is best used with water, and thoroughly mixed with it in the proportion of a pound to the gallon; or, of the solution as commonly sold, about two pints may be mixed with a gallon of water. *Carbolic acid* (in the fluid form in which it is commonly sold) should be dissolved in about eighty times its volume of water, with which it must be mixed by strong shaking in a closed vessel. *Sulphate of iron* should be dissolved in ten times its weight in water; a solution which is best effected by employing hot water and stirring. *Of perchloride of iron and chloride of manganese* the common concentrated solutions may be used, diluted with ten or twelve times their bulk of water. *Sulphate of zinc* should be dissolved in about ten times its weight of warm water. *Of chloride of zinc* the common concentrated solution may be diluted with eight or ten times its bulk of water. *Of chloride of soda* the common solution may be used like that of chloride of lime. *Of permanganate of potash* an ounce may be dissolved in a gallon of water.

All disinfectants must be used in *quantities proportionate* to the amount of matter or surface to be disinfected. When the matters requiring to be disinfected have an offensive smell, the disinfectant should be used till this smell has entirely ceased; and as often as the smell recurs the disinfectant must again be used.

Directions are given for the disinfection of cesspools, linen and woollen clothing, and evacuation.

## DIET.

Advice is given as to diet, which should be solid in preference to liquid, and easily digestible; all dishes known to promote looseness of the bowels must be avoided. Clothing should be warm, and it is recommended to wear a flannel bandage round the loins.

## EARLY TREATMENT.

The slightest degree of looseness of the bowels, whether attended with pain or otherwise, ought to be regarded and treated as the commencement of the disease, which at this stage is capable of being arrested by simple means, but if neglected only for a few hours may suddenly assume a fatal form. What these simple means are we are not told. When a case occurs on board ship the treatment recommended is to send the patient to bed and keep him warm. Give ten grains of the aromatic powder of chalk and opium in half a wine-glass of peppermint water or weak brandy and water, and repeat the dose every hour or two, according to the severity of the purging. If the looseness should result from bad or indigestible food, or if the discharges are unnaturally offensive and attended with griping pain, a dose of castor oil or rhubarb should be given before the opiate. Glauber's salts and Epsom salts are dangerous. Prolonged costiveness should not be neglected.



## AN INTERNATIONAL PHARMACOPEIA.

THE origin and development of the scheme for an International Pharmacopœia are contemporaneous with the growth of the International Pharmaceutical Congress. Long considered desirable, it was first brought into the arena of debate at the Congress meeting held at Brunswick, 1867, and there only as a wish for "uniformity in the prescriptions for pharmacopœia galenical preparations." No steps were taken to carry out the object; there was merely the suggestion that a Universal Pharmacopœia would be a good thing, but at Paris, 1869, the Congress had a "definite proposition" anent the matter, the shell was broken and the Paris Pharmaceutical Society received charge of the fledgling. Two years later at the Vienna Congress we find "a wish expressed for the speedy completion of the work," and then at St. Petersburg, 1874, the Paris Society tabled a manuscript Pharmacopœia; at the same time *various preliminaries* were settled, the Paris body was thanked for its trouble, and the Congress reconsidered the whole matter, particularly the lines upon which it had hitherto proceeded.

A bulky manuscript is not the best introduction to a budding author, nor a happy foreboder of simplicity and uniformity. The Paris manuscript, carefully compiled and showing evidence of great skill and unbounded zeal, aimed too high, included too much, yet was strictly to the order of the Congress, a Universal Pharmacopœia. And so it awakened the Congress to a sense of its real position. Various "preliminaries" for a more modest effort were promulgated, and when the Congress came to London in 1881, the Pharmacopœia was finally dropped and a start made for "the equalisation of the strength of official pharmacopœial preparations containing potent drugs." Peter Squire, as the leading advocate of this scheme, gave convincing argument and strong evidence for its desirability. There were other contributions to the same object, and a good discussion followed, as also the indispensable committee to discuss and carry out details.

We remarked at the time that "the prospects of an International Pharmacopœia were, perhaps, a little advanced, though that was putting the matter quite sanguinely enough. . . . There seemed to be an almost hopeless disagreement . . . as to the scope of such a Pharmacopœia. In England it was felt that all that was practical, and, perhaps, desirable to accomplish is to bring into harmony just those few preparations in which the existing difference in strength might have a fatal result if a prescription were dispensed according to one and the other formula." And again, "the result aimed at is so obviously desirable that it may prove easier than seems probable to do a little between now and the next Congress at Brussels." That Congress is to be held in September, and the committee will be called upon to give an account of its stewardship. We trust that it will be a good account, that something substantial will be tabled, but we confess that we are not yet sanguine. The ideas represented on the committee vary so widely that there are grounds for believing that even now a basis for practical discussion will not have been established. Whether this be the case or not we have thought it desirable to take the opportunity of a somewhat international circulation to submit, as a contribution to this discussion, a scheme of an International Pharmacopœia, which, imperfect though it may be in details, does, we know, fairly represent what many British pharmacists consider would meet all reasonable requirements.

The scope of such a work as we propose is limited, and consequently it involves only in a small degree those subjects which formed burning questions at the London and other congresses, such as chemical nomenclature. It is necessary, however, that we should recall, though briefly, a few of the topics which are of chief importance.

All are agreed that an International Pharmacopœia should be printed in the Latin language; a large official edition would not be required, because private enterprise would provide good translations in the different tongues.

As to nomenclature, it is most important that a good system should be adopted. At present there is considerable want of uniformity; for example, we may give three names of solution of perchloride of iron, each of which is typical of a class:—

1. Ferrum sesquichloratum solum.
2. Liquor ferri perchloridi.
3. Solutio chloreti ferri.

The first is objectionable because it ignores the generally-recognised principle that the word which indicates the nature of the preparation should be placed first, and in it Latin construction is also an unrecognised quantity. In the third form the word which represents the acidulous part of the salt is placed before that designating the base. A decision is required on this point, because it is not uncommon. The question has been discussed *ad nauseam*, but by no one so happily and logically as Professor Attfield. For the priority of the acidulous radicle we are not aware of any arguments; for the priority of the base we have the following:—

*Consistency with Chemical Nomenclature and Formulae.*—Some Pharmacopœias may render ferric chloride as  $\text{Fe}^2\text{Cl}^3$ , and some as  $\text{Fe}_2\text{Cl}_3$ ; but we know of none which ventures to give it as  $\text{Cl}^3\text{Fe}^2$ , or  $\text{Cl}_3\text{Fe}_2$ . The latter are absurd.

The base in the majority of cases is the potent element, and therefore should have the prominence.

Moreover, the majority of Pharmacopœias, or, rather, the Pharmacopœias which represent the greatest number of people, give the base priority; and in a case of this kind we must work for the good of the greatest number.

Then there is still to be considered whether the adjectival form *chloretum ferricum*, or the substantive form *ferri perchloridum*, is the better. The former is the Continental form, the latter is almost peculiar to English-written Pharmacopœias. Again, in the case of several bases the names employed on the Continent are different from those employed in England. Thus: *Stibium* for *antimonium*, *natrium* for *sodium*, and *kaliun* for *potassium*. For the adjectival *versus* the substantive form there is no go-between, both are in accordance with chemical nomenclature, and there is a tendency—a strong tendency—for the adjectival form in Great Britain; it is shorter and more expressive. But any attempt in the meantime to harmonise these differences would only lead to grave errors. In the case of the Continental names of bases there is no reason why they should not be generally adopted, because they are universally familiar, and are those upon which the symbols are founded—thus, Sb, Na, and K. Here Attfield acts as our "guide, philosopher, and friend," and we use both systems where necessary, though this, happily, is seldom. For purely galenical preparations, such as extracts and tinctures, we follow the British system of nomenclature when suitable.

As to weights and measures, the British system of measuring liquids is exceptional; the rule is to weigh everything. Both systems serve the same ends in practice, though we are inclined to think that it is much easier to measure a liquid than to weigh it; but this is a matter of experience and opinion. We discard measure and adopt weight, because it is the rule; therefore, in order to be correct, International Pharmacopœia preparations should be weighed when dispensed. This, of course, would give rise to much inconvenience in this country, but we would point out that it need not necessarily be followed, for the specific gravity of a preparation could be taken when it is stocked, and a note of the equivalent placed upon the bottle. Suppose, for example, tincture of digitalis were found to be sp. gr. 0.951, then we could label it:—

Tr. digitalis, sp. gr. 0.951.  
1 in 10 weight.  
1 in 10½ measure.  
℥ 63 = gr. 60.

Common sense will dictate the rule to be followed, for in the majority of cases the specific gravities of liquid preparations are so near the normal that the therapeutic difference following dispensing in either way is extremely minute.

In our formulæ all quantities are expressed in *parts by weight*, so that any system of weights may be taken. We append to each formula a note on the difference between the given strength of the preparation and the strengths of the national pharmacopœial preparations, and in the case of the British the strength is given by weight, so that the actual



difference is given. B.P. tinctures are calculated on the specific gravity of the menstruum, so that the difference is a little greater than we give it. An eminent pharmacist threw out the suggestion at the London Congress that dilute acids should be included in an International Pharmacopœia. We give formulæ for them, although it is a most difficult matter to gain uniformity in this class of preparations, because several reasonable principles are followed. Thus, in the British Pharmacopœia the dilution of the mineral acids is based upon their saturating power; in some other Pharmacopœias a decimal system is followed, the proportion being based upon *anhydrous* acid, and in some other cases (as in the United States Pharmacopœia) a decimal proportion of *real acid* is taken. Each system has its advantages; the British system is beautiful in theory, and for some purposes very convenient, but for all-round utility the decimal system is the better. Anhydrous acid is hypothetical, so far as an aqueous solution of any acid is concerned, and as this is an age of facts we prefer to base our formulæ on the proportion of real acid.

It is to be understood that all chemicals are to be of the purest. Unless in exceptional cases, we do not give tests, principally because the length of this article would be unduly extended. We do not introduce vegetable bases of doubtful composition; it will be time enough to adopt these when their chemical composition is free from doubt.

Crude drugs are only described and mentioned where necessary.

Lastly, we would remind our readers that this is a suggestive sketch of an International Pharmacopœia; but, nevertheless, we have not hastily put it together, have taken each preparation on its merits, have left out some which are potent, but which are of purely local importance, and we would suggest that if any such work is ever to be adopted, all differences of opinion must be sunk before it can be, and pharmacists everywhere must have a simple faith in the body whom they appoint to act in the matter.

#### ACETUM SCILLÆ.

Squill bulb, dried and in coarse powder .. .. 1 part  
Dilute acetic acid, a sufficiency.

Macerate the squill in 7 parts of the acid for six days, then strain and again macerate in 2 parts of the acid for one day, strain and press the marc. Mix the liquids, allow the flocculent matter to settle, then filter and make up the filtrate to 10 parts, with dilute acetic acid.

Alcohol, ordered by a few Pharmacopœias, is here omitted; it is not necessary for the preservation of the preparation. The strength differs only from the British, which is 1 in 86.

#### ACIDUM ACETICUM.

A colourless liquid containing 30 per cent. of real acetic acid,  $\text{HC}_2\text{H}_3\text{O}_2$ . Sp. gr. 1.041. Should be free from impurities.

This is 3 per cent. weaker than the B.P. acid, and 6 per cent. weaker than the U.S.P. The French acid is 20 per cent. stronger. *Pharm. Germ.* has an acid of the same strength called *Acidum Aceticum Dilutum*.

#### ACIDUM ACETICUM DILUTUM.

					Parts
Acetic acid	..	..	..	..	1
Distilled water	..	..	..	..	5

Mix. Sp. gr. 1.006 to 1.007. Contains 5 per cent. of real acetic acid.

This acid is based upon the general strength of vinegar, which is used in a few Pharmacopœias for *Acetum Scillæ*. It is somewhat weaker than the U.S.P. acid.

#### ACIDUM HYDROCHLORICUM.

A liquid containing 25 per cent. of real hydrochloric acid,  $\text{HCl}$ . Sp. gr. 1.125. Free from other acids and metallic impurities.

Some Pharmacopœias have the name *Acidum Hydrochloratum*; this we drop as being out of harmony with the nomenclature of acids in general. It contains nearly 10 per cent. less acid than the French, and 6.8 per cent. less than the B.P. and the U.S.P. acid. This, and other strong acids, are here introduced merely for the preparation of dilute acids. Stronger acids in proper proportion may be used for the same purpose.

#### ACIDUM HYDROCHLORICUM DILUTUM.

					Parts
Hydrochloric acid	..	..	..	..	2
Distilled water	..	..	..	..	3

Mix. Sp. gr. 1.049. Contains 10 per cent. of real hydrochloric acid.

Slightly stronger than B.P. acid, and over 2 per cent. stronger than the German and Russian.

#### ACIDUM HYDROCYANICUM DILUTUM.

A solution of hydrocyanic acid in water, and containing 2 per cent. of the real acid— $\text{HCN}$ . Should be free from other acids, and should yield 10 parts of dry cyanide of silver when 103 parts of the acid are treated with an excess of nitrate of silver *secundum artem*.

The French acid is only HALF this strength.

#### ACIDUM NITRICUM FORTIUS.

A fuming and colourless liquid containing 70 per cent. of real nitric acid— $\text{HNO}_3$ . Specific gravity, 1.420.

#### ACIDUM NITRICUM MITIUS.

A colourless liquid containing 30 per cent. of real nitric acid— $\text{HNO}_3$ . Specific gravity, 1.180. Nitric acid should be free from other acids and metallic impurities.

The stronger acid is the same as B.P. and U.S.P. acid and 7 per cent. stronger than the French. It is nearly of the strength of *Acidum nitrico-nitrosum* of some Pharmacopœias which it could replace. If this were done, the weaker acid (only used for the preparation of dilute acid) could be omitted.

#### ACIDUM NITRICUM DILUTUM.

					Parts
Stronger nitric acid	..	..	..	..	1
Distilled water	..	..	..	..	6

Mix. Or—

Weaker nitric acid	..	..	..	..	1
Distilled water	..	..	..	..	2

Mix. Specific gravity, 1.059. Contains 10 per cent. of real nitric acid.

Contains 6 per cent. less than B.P., and 7 per cent. less than Russian acid.

#### ACIDUM PHOSPHORICUM DILUTUM.

A solution of phosphoric acid in water. Specific gravity, 1.057. Contains 10 per cent. of real phosphoric acid— $\text{H}_3\text{PO}_4$ .

This is double the strength of the German acid; it is the same as that of the U.S.P. Others contain 10 per cent. of anhydrous acid ( $\text{P}_2\text{O}_5$ ).

#### ACIDUM SULPHURICUM.

A colourless, heavy liquid, containing 98 per cent. of real sulphuric acid— $\text{H}_2\text{SO}_4$ . Specific gravity, 1.840. Free from other acids and metallic impurities.

Acid of this strength is recognised in nearly all Pharmacopœias.

#### ACIDUM SULPHURICUM DILUTUM.

					Parts
Sulphuric acid	..	..	..	..	1
Distilled water	..	..	..	..	9

Mix. Specific gravity, 1.057 to 1.070. Contains 10 per cent. of real sulphuric acid.

Most Pharmacopœias recognise a 10-per-cent. strength, but chiefly of anhydrous acid. Consequently the above is slightly weaker, and is over 6 per cent. weaker than the German and Russian acids.

#### ÆTHER.

A volatile liquid prepared from ethylic alcohol and containing about 95 per cent. of ethylic oxide [ $(\text{C}_2\text{H}_5)_2\text{O}$ ] and about 5 per cent. of alcohol. Specific gravity, 0.725.

This ether is a little stronger than the B.P. ether, but is the same as that used elsewhere.

#### AQUA AMYGDALARUM AMARARUM CONCENTRATA.

A liquid prepared from bitter almonds by maceration in water and spirit and distillation. Contains 1 part of hydrocyanic acid in 1,000 parts.

The process to which we refer is the German, which is typical of the method generally followed. Another method is to dissolve bitter almond oil (purified) in spirit, diluting



with water, then adding a known quantity of dilute hydrocyanic acid to the mixture. *The U.S.P. water contains no hydrocyanic acid.*

#### AQUA AMYGDALARUM AMARARUM DILUTA.

	Parts
Concentrated bitter-almond water .. ..	1
Distilled water .. ..	29

Mix. This water contains 0.033 of a part of hydrocyanic acid in 1,000 parts.

Both waters represent a fair average of existing strengths.

#### COLLODIUM CANTHARIDATUM.

Cantharides, in powder .. ..	75 parts
Ether, a sufficiency	
Rectified spirit .. ..	16 parts
Pyroxylin .. ..	4 ..

Place the cantharides in a stoppered bottle, and pour upon it 100 parts of ether; shake well, and, after the cantharides has subsided, mark the bottle at the ether meniscus. Macerate for three days, shaking frequently, then drain off the ethereal fluid, filter, and reserve. Again fill up the bottle with ether to the meniscus mark, and macerate for two days; strain, press and filter. Evaporate the filtrate until the residue added to the first ethereal fluid shall weigh 80 parts, then add the alcohol, and dissolve the pyroxylin in the mixture.

The existing strengths of this preparation vary from 60 per cent. in the case of the U.S.P. to one in one in the case of the German Pharmacopœia. The former is prepared by exhausting the cantharides with chloroform, but all others are simple maceration in ether. In the latter, the nature of the processes does not favour constant strength; this we have endeavoured to remedy by double maceration, and by fixing the proportion of the ethereal product—a point which the Pharmacopœias neglect.

#### EMPLASTRUM CANTHARIDIS.

A uniform strength of 1 part of cantharides in 3 of the plaster might be recognised. The German plaster contains 1 in 4, but all others are nearer 1 in 3. The oleaceous and resinous ingredients used in the different countries are peculiar to each, so that it would be better to leave this part undisturbed.

#### EXTRACTA.

There are few extracts which come under the equalising process. It would be desirable to have the green narcotic extracts the same all over, but there are several strong reasons for not interfering. First, they are seldom used *per se* as therapeutic agents; they generally form the soothing ingredients of cathartic pills. Second, the Continental extracts are prepared from the fresh or dried leaves and twigs, by maceration in weak spirit, &c.; and, third, any uniformity of method which might be obtained would be utterly nullified by variation in the drugs themselves through natural and uncontrollable influences.

#### EXTRACTUM NUCIS VOMICÆ VEL STRYCHNI SEMINÆ.

	Parts
Nux vomica in powder .. ..	1
Dilute spirit .. ..	7

Macerate the nux vomica for seven days in 4 parts of the menstruum, then strain, press the marc, and reserve the liquor. Again macerate in 3 parts of spirit for two days; strain, press, and mix the liquor with the first, filter, and evaporate to a pilular consistence.

*The nux vomica may be exhausted by percolation secundum artem, if desired.* The menstruum ordered is nearly the same as that recommended by Messrs. Dunstan & Short. Pharmacopœias are not alike as to menstrea, hence the resulting strengths are not alike.

#### EXTRACTUM OPII VEL EXTRACTUM THEBAICÆ.

	Parts
Opium in powder .. ..	1
Water (distilled) .. ..	10

Macerate the opium in 5 parts of water for two days, then strain, press, and reserve the liquor. Again macerate in 3 parts of water, and for a third time in 2 parts, for one day each time; strain, press the marc, mix the liquors, filter, and evaporate to a pilular consistence. While the extract is warm stir into it 5 per cent. of its weight of glycerine.

Extract of opium should contain not less than 15 per cent. and not more than 20 per cent. of morphia.

#### EXTRACTUM PHYSOSTIGMATIS VEL CALABAR FABÆ.

	Parts
Calabar bean in coarse powder .. ..	1
Dilute spirit .. ..	7

Macerate the calabar bean in the manner directed for extract of nux vomica, and evaporate the liquors to a pilular consistence.

The same remark may be made of this extract as of extract of nux vomica. Several Pharmacopœias use a strong alcoholic menstruum, some use a dilute spirit about the strength ordered here, and others use first a strong alcoholic menstruum and then water, both being afterwards incorporated. The result is that no two extracts are alike. By the process here given an extract is obtained which is a fair compromise of existing strengths.

#### EXTRACTUM CANNABIS INDICÆ.

	Parts
Indian hemp in coarse powder .. ..	1
Rectified spirit .. ..	7

Macerate the hemp in the rectified spirit in the manner directed for extract of nux vomica, and evaporate the filtered liquors to a pilular consistence.

Used for the preparation of tinctura cannabis indicæ, replacing the herb in a few instances.

#### INFUSUM DIGITALIS.

	Parts
Digitalis leaves in powder .. ..	1
Boiling distilled water .. ..	100

Infuse for one hour in a covered vessel, strain and make up, if necessary, to 100 parts.

This preparation is weaker than the U.S.P. infusion, which is 1 in 66, with cinnamon and alcohol. The B.P. infusion contains 1 in 146; our proportion is, therefore, the mean of these, and it is at the same time of the same strength as other Pharmacopœia infusions, and altogether the most convenient strength.

#### LIQUOR AMMONIÆ VEL AQUA AMMONIÆ CAUSTICÆ.

A solution of ammonia gas in water, specific gravity 0.959, containing 10 per cent. of ammonia, NH<sub>3</sub>.

The French solution is double this strength, but others are the same.

#### LIQUOR ACIDI ARSENIOSI VEL LIQUOR ARSENICI HYDRO-CHLORICI.

	Parts
Arsenious acid .. ..	1
Hydrochloric acid .. ..	3
Distilled water, a sufficiency	

Add the hydrochloric acid to 80 parts of water, and boil the arsenious acid in the mixture until it is dissolved, filter if necessary, and wash the filter with enough water to make 100 parts.

The name is the U.S.P. one, which we think better than the B.P. one, which, however, we give as a synonym. The strength is the same as the generally-recognised strength of Fowler's solution, and is only very slightly stronger than the B.P. solution.

*It is ten times stronger than the French solution, Liqueur de Boudin.*

#### LIQUOR ARSENICALIS (FOWLERI) VEL SOLUTIO KALII ARSENICOSI.

	Parts
Arsenious acid .. ..	1
Carbonate of potassium .. ..	1
Colouring tincture .. ..	3
Distilled water, a sufficiency	

Boil the arsenious acid and carbonate of potassium in 40 parts of water, and filter if necessary. After the solution is cold add the colouring tincture, and enough water to make 100 parts.

The name *Liquor Arsenicalis (Fowleri)* is familiar to all pharmacists of all countries, and is the best name for preventing mistakes. The synonym embodies a class of names which infer that the preparation is a solution of arseniate of potassium, which it is not. The strength agrees with all but the British, which is a trifle weaker. A colouring and flavouring tincture for the liquor will have to be created, if it is desirable



to have uniformity on this point. Thus, though three Pharmacopœias order tinctura lavandula co. to colour, the three tinctures are not the same. The case is similar in other instances where flavouring ingredients of the same name are used. We cannot insist upon *absolute* uniformity, and here is an instance where we may allow each country to follow its custom; but at the same time, and in order to distinguish this solution from the acid solution of arsenic, it should be of a red colour, and should possess an agreeable odour. For this purpose it will be sufficient to colour with 2 per cent. of red sandal wood, the flavouring tinctures presently used by all Pharmacopœias.

#### LIQUOR FERRI SESQUICHLORATI VEL LIQUOR FERRI PERCHLORIDI FORTIOR.

An aqueous solution containing 50 per cent. of hydrated sesquichloride of iron ( $\text{Fe}_2\text{Cl}_6, 12\text{H}_2\text{O}$ ) and a little free hydrochloric acid; specific gravity, 1.300.

Solution of this strength is common on the Continent of Europe. It is much weaker than the U.S. and B.P. solutions, and somewhat stronger than the French and German. *Note.*—Several Pharmacopœias order the solution to be made from the perchloride by dissolving it in water. The solution so obtained is quite different in appearance from that of which the British liquor is a type.

#### LIQUOR HYDRARGYRI PERCHLORIDI VEL LIQUOR HYDRARGYRI BICHLORATI.

	Parts
Perchloride of mercury .. .. .	1
Distilled water .. .. .	999

Dissolve the perchloride of mercury in the water.

The strength of this solution is a fair average of existing strengths. The B.P. solution is stronger (1 in 875), and the difference between it and the one we give is greater than in any other case. We omit alcohol and ammonium chloride, which are in some Pharmacopœias; both are unnecessary either for solution or preservation.

#### LIQUOR IODI.

	Parts
Iodine .. .. .	1
Iodide of potassium .. .. .	2
Distilled water .. .. .	97

Dissolve the iodine and iodide of potassium in the water.

This solution is much weaker than those of the B.P. (4.5 per cent.) and U.S.P. (5 per cent.). It agrees with a similar preparation of some Continental Pharmacopœias. In fixing upon a 1-per-cent. solution we are led to do so chiefly by the fact that the preparation is for internal use (*an aqueous solution of iodine is quite unsuitable for external use*). The dose of a 1-per-cent. solution can be stated in a measured quantity (such as a half or whole teaspoonful), but a 5-per-cent. solution must necessarily be measured in drops.

#### LOTIO MERCURIALIS FLAVA VEL AQUA PHAGEDENICA.

	Parts
Perchloride of mercury, in powder .. .. .	1
Lime water .. .. .	249

Mix.

The name *Lotio mercurialis flava* is better, both in latinity and for convenience, than *Lotio hydrargyri flava*. The strength is a fair approximation to the general strength. The French and Russian are 1 in 300, the B.P. 1 in 265.

#### LOTIO MERCURIALIS NIGRA.

	Parts
Subchloride of mercury .. .. .	1
Lime water .. .. .	149

Mix.

The Russian lotion contains 1 in 60.

#### LIQUOR PLUMBI SUBACETATIS VEL LIQUOR PLUMBI SUBACETICI.

A solution of sp. gr. 1.228, and containing 25 per cent. of the subacetate would be most suitable as a compromise. This is the U.S.P. strength—some are stronger, others weaker. We do not think that the solution is worthy of a place in an international Pharmacopœia.

#### LIQUOR SODII ARSENIATIS VEL LIQUOR NATRII ARSENICI.

	Parts
Anhydrous arseniate of sodium .. .. .	1
Distilled water .. .. .	99

Dissolve.

This solution is represented in Pharmacopœias in two strengths, viz., 1 in 100 (nearly), and 1 in 500 or 600. The weaker solution is *Liquor Pearsoni*. A 1-per-cent. solution is the better, because it is more akin to the other preparations of arsenic, and it is a most important matter to have such uniformity. A solution of mean strength (1 in 250, for instance) would in this case disturb everybody.

#### NUX VOMICA VEL SEMEN STRYCHNI.

The seed of *strychnos nux vomica*. Diameter not less than 20 millimetres. The seeds should be concavo convex; edges generally acute, and the surfaces distinctly silky-like. Should yield not less than 35 per cent. of brucia and strychnia.

The description is intended to exclude the Madras seed, which contains less than the minimum of alkaloids.

#### OPIMUM.

Opium to be used in the International Pharmacopœia should be dried and powdered, and in this condition should contain not less than 10 per cent., nor more than 13 per cent., of morphia.

In addition to a great want of uniformity in the preparations of opium the Pharmacopœias also exhibit a decided variance in the *minima* of morphia content. The standard which we have fixed is a reasonable compromise, 10 per cent. being the common minimum. It is, of course, necessary to fix a maximum; indeed, it would be much better to make the maximum the only standard, but the benefit resulting is not worth the responsibility of fixing a hard and fast line.

#### PULVIS IPECACUANHÆ ET OPII VEL PULVIS IPECACUANHÆ COMPOSITA.

	Parts
Ipecacuanha, in powder .. .. .	1
Opium, in powder .. .. .	1
Sulphate of potash .. .. .	8

Mix the powders intimately in a mortar, then sift. The French Dover's powder is double this strength, because it is made with dried *extract* of opium. The late Peter Squire discussed this subject thoroughly at the London Congress, and showed that France is distinctly in error.

Sulphate of potash is replaced in some Pharmacopœias by sugar of milk.

#### SYRUPUS OPII.

	Parts
Extract of opium .. .. .	2
Distilled water .. .. .	8
Syrup .. .. .	990

Dissolve the extract of opium in the water and mix it with the syrup.

Syrup of opium is made in some cases with the tincture or wine, but generally the extract is employed. A syrup, such as the above, agrees in strength with more than it differs from, and the difference is not great.

Syrupus opii should replace syrupus papaveris (a most unsatisfactory preparation, whether uniformised or not).

#### SPIRITUS RECTIFICATUS.

Alcohol ( $\text{C}_2\text{H}_5\text{HO}$ ), of specific gravity 0.833 to 0.835, containing 85 per cent. by weight of absolute alcohol; the rest water.

Should be bright and colourless, and free from amylic odour.

#### SPIRITUS DILUTUS.

	Parts
Rectified spirit .. .. .	3
Distilled water .. .. .	1

Specific gravity, 0.884 to 0.886. Contains about 65 per cent. of absolute alcohol.

#### SPIRITUS TENUIS.

	Parts
Rectified spirit .. .. .	10
Distilled water .. .. .	11

Mix. Specific gravity, 0.939. Contains about 40 per cent. of absolute alcohol.

*Note.*—As *menstrua* it is most important to have in an International Pharmacopœia alcohols of different strengths,



because much of the variation in the strength of some preparations is due to the use of different alcoholic menstrua. Indeed, in some cases a preparation is universally alike as to the proportion of active ingredient; but otherwise the similarity is nowhere.

Several Continental Pharmacopœias have already recognised what is now being every day demonstrated, namely, that *two* alcoholic menstrua such as the B.P. rectified and proof spirits are not sufficient for the whole requirements. Hence we modify this class of menstrua.

RECTIFIED SPIRIT is similar to the Continental *Spiritus*, *Spiritus concentratus*, and *Spiritus vini rectificatus*. It is the same as *alcohol* 90°, of the French *Code*: slightly stronger than the B.P. spirit of the same name, and contains about 6 per cent. less alcohol than *alcohol* U.S.P.

SPIRITUS DILUTUS is used on the Continent, the strength varying from 55 to 62 per cent. by weight. The Russian *spiritus dilutus* is, however, a 31-per-cent. spirit, and the *alcohol dilutum*, U.S.P., a 45.5-per-cent. spirit. The Russian Pharmacopœia also orders a 70-per-cent. spirit in some cases. We use this spirit in cases where active principles are associated with fatty or resinous bodies, as well as extractive matter. Experiment has proved alcohol of this strength to be the best in these cases.

SPIRITUS TENUIS replaces proof spirit in many cases. It is a menstruum adapted for drugs whose active ingredients are soluble in water alone, the alcohol being required principally for preservative purposes. The strength which we adopt is the mean of the weaker spirits of Pharmacopœias (omitting the French 30° 25-per-cent. spirit).

## SPIRITUS CAMPHORÆ.

	Parts
Camphor .. .. .	1
"Spiritus dilutus" .. .. .	9

Dissolve.

The strength is the same as most Continental preparations of this name. It is weaker than the British (1 in 8.54 by weight), and stronger than the Russian (1 in 13). The B.P. is peculiar in ordering strong spirit as a solvent.

## SPIRITUS ÆTHERIS VEL LIQUOR ANODYNUS HOFFMANNI.

	Parts
Ether .. .. .	1
Rectified spirit .. .. .	3

Differs from the French (1 in 2) and Russian (1 in 3). It is slightly weaker than the U.S. and B.P. preparations. *Note*.—*Hoffmann's Anodyne*, U.S.P., contains *etheral oil*; no other has it.

## SYRUPUS SCILLÆ.

	Parts
Vinegar of squills .. .. .	4
Sugar .. .. .	6

Dissolve by the aid of heat.

This is the U.S.P. formula. The Russian contains no acetic acid.

## TINCTURÆ.

We need not give here a treatise on tincture-making. This important branch of pharmacy has been raised to a fine art in the United States, and in this country we are also approaching this condition of things. We hold the belief that percolation is the Royal road to efficient tincture-making, but on the Continent this method is *officially* unknown; double maceration is the nearest approach to it. We adopt double maceration here, but there is no reason why percolation should not be used if pharmacists wish it. Our object in giving directions at all is to prevent *single maceration*, which must on no account be permitted. A very common Continental omission or error is the failure to determine the proper quantity of the product—this we fix, of course.

In several instances the menstruum has been adapted to the requirements of the case, so that alteration is apparent. During maceration tinctures should be agitated four or five times a day.

## TINCTURA ACONITI RADICIS.

	Part
European aconite root, in coarse powder .. .. .	1
"Spiritus dilutus," a sufficiency.	

Macerate the root in 6 parts of the spirit for seven days, then strain and press the marc, reserving the tincture. Again macerate for two days in 4 parts of spirit, strain and press as before. Mix the tinctures, filter, and, if necessary, make up the filtrate to 10 parts with "Spiritus dilutus."

This is the more common strength, the exceptions being, U.S.P. 1 in 2.5; B.P. 1 in 6.7; and French 1 in 5. The B.P. and U.S.P. use stronger alcoholic menstrua than any other. Apart from purely pharmacopœial circumstances, and in consideration of the therapeutic aspects of the case, it is desirable to go towards the weak rather than the strong side in uniformising this preparation.

A liniment such as the B.P. liniment would help to replace the strong tinctures, which are also used *externally*.

## TINCTURA ACONITI HERBÆ.

	Part
Aconite flowering herb, dried, and in coarse powder .. .. .	1
"Spiritus tenuis," a sufficiency	

Macerate for six days in 7 parts of *spiritus tenuis*, then strain and press; reserve the tincture. Again macerate for three days in 3 parts of the spirit, strain and press. Mix the tinctures, filter, and, if necessary, make up to 10 parts with "spiritus tenuis."

## TINCTURA BELLADONNÆ.

	Part
Belladonna leaves, in powder .. .. .	1
"Spiritus tenuis," a sufficiency	

Make a tincture in the manner directed for *tinctura aconiti herbæ*, so that 10 parts of the product shall represent 1 part of dried belladonna leaves.

The British tincture (1 in 18.4 by weight) is weaker than any other. Those of the French type (1 in 5) are the strongest. The U.S.P. is 1 in 6.6, all others are 1 in 10, or thereby.

## TINCTURA CANTHARIDIS.

	Part
Cantharides, in powder .. .. .	1
"Spiritus dilutus," a sufficiency	

Macerate the cantharides in 15 parts of *spiritus dilutus* for six days, then strain, press, and reserve the tincture. Again macerate for two days in 5 parts of the spirit, strain, press, and mix the tinctures; then filter, and make up to 20 parts with dilute spirit if necessary.

This tincture is equal to 1 in 20. The Pharmacopœias give very varied strengths, ranging from 1 in 10, as in the German, to 1 in 73.6 (by weight) as in the British. We have adopted the U.S.P. strength, which is a fair compromise, so that the resulting tincture is only half the strength of the French, German, and Russian, and nearly four times stronger than the British. There is a strong tincture (1 in 5) in some Pharmacopœias.

## TINCTURA CANNABIS INDICÆ.

	Parts
Extract of Indian hemp .. .. .	1
Rectified spirit .. .. .	19

Dissolve.

The French, Russian, and U.S. Pharmacopœias make this tincture direct from the herb. The strength given agrees with the German Pharmacopœia (B.P. is 1 in 18.7 by weight), and nearly the same as the French, which is 1 of the herb in 5. The Russian and U.S. are only half the strength of the French.

## TINCTURA COLCHICI SEMINIS.

	Part
Colchicum seed, bruised .. .. .	1
"Spiritus dilutus," a sufficiency.	

Macerate the colchicum seed in the spirit in the manner directed for *tinctura aconiti radici*, so that 10 parts of tincture will represent 1 part of colchicum seed.

This tincture is only half the strength of the French, two-thirds of the U.S.P. tincture, and the B.P. one contains 1 in 73.6. It agrees with all others.



## TINCTURA DIGITALIS.

	Part
Digitalis leaves, in powder .. .. .	1
"Spiritus tenuis," a sufficiency.	

Make a tincture in the manner directed for *tinctura aconiti herbae*, so that 10 parts of tincture will represent 1 part of digitalis leaves.

The remarks made regarding tincture of colchicum also apply to *tinctura digitalis*.

## TINCTURA HYOSCYAMI.

	Parts
Henbane leaves, in powder .. .. .	2
"Spiritus tenuis," a sufficiency.	

Make a tincture in the manner directed for *tinctura aconiti herbae*, so that five parts of tincture will represent 1 part of henbane leaves.

A tincture of this strength approaches nearer to that generally employed than any other would. It is the same as several, and is double the strength of the Russian. The present B.P. tincture is 1 in 7-36, and the U.S.P. 1 in 6-6.

## TINCTURA IODI VEL SOLUTIO IODI SPIRITUOSA.

	Parts
Iodine .. .. .	2
Rectified spirit .. .. .	23

Dissolve.

Contains 1 of iodine in 12.5 parts of tincture. This is three times stronger than the B.P. tincture, which is practically useless for external application. Other Pharmacopœias vary from 1 in 10 to 1 in 20. The above is the U.S.P. strength.

In order to indicate that this tincture is not for internal administration, iodide of potassium is omitted; but it may be stated that this ingredient is peculiar to a few Pharmacopœias, and generally makes such tinctures *Tinctura iodi composita*.

## TINCTURA IPECACUANHÆ.

	Part
Ipecacuanha root, in powder .. .. .	1
"Spiritus dilutus," a sufficiency	

Make a tincture in the manner directed for *Tinctura aconiti radices*, so that 10 parts of the tincture will represent 1 part of ipecacuanha.

Double the strength of the French.

## TINCTURA LOBELIÆ.

	Part
Lobelia herb, cut small .. .. .	1
"Spiritus dilutus," a sufficiency	

Make a tincture in the manner directed for *Tinctura aconiti herbae*, so that 10 parts of tincture will represent 1 part of lobelia herb.

A little weaker than the B.P. (1 in 7-36), and only half the strength of French and U.S. tinctures. Same as others.

## TINCTURA NUCIS VOMICÆ VEL TINCTURA STRYCHNI SEMINIS.

	Part
Nux vomica, in powder .. .. .	1
"Spiritus dilutus," a sufficiency.	

Make a tincture in the manner directed for *Tinctura aconiti radices*, so that 10 parts of tincture will represent 1 part of nux vomica.

This is a very general strength, although it is only half the strength of the U.S.P., and somewhat weaker than the B.P., which Pharmacopœias order stronger alcoholic menstrua than any other, and consequently do not contain the full available alkaloid. Regarding the menstruum, see *Ect. nucis vomicæ*.

## TINCTURA OPII VEL TINCTURA THEBAICÆ.

	Part
Opium, in coarse powder .. .. .	1
"Spiritus tenuis," a sufficiency.	

Make a tincture in the manner directed for *Tinctura aconiti herbae*, so that 10 parts of tincture will represent 1 part of opium.

Tincture of opium is fairly uniform throughout, the strength being as we give it, and a weak spirit the menstruum. The French preparation contains 1 of extract in 12, that is, nearly double this strength. The B.P. contains 1 in 11-8 by weight.

## TINCTURA OPII CAMPHORATA VEL TINCTURA OPII BENZOICÂ, TINCTURA CAMPHORÆ COMPOSITA.

	Parts
Opium, in powder .. .. .	5
Camphor .. .. .	4
Oil of anise .. .. .	4
Benzoic acid .. .. .	5
Spiritus dilutus, a sufficiency.	

Macerate for four days in 900 parts of the spirit, then filter and wash the filter with sufficient spirit to make 1,000 parts.

Paregoric elixir, containing 1 of opium in 200, is a very generally recognised strength. This is also practically the B.P. strength. The U.S.P. contains 1 in 250. The other ingredients are a fair mean of Pharmacopœial proportions. The German type of this tincture is peculiar in containing four times as much benzoic acid as opium.

## TINCTURA OPII CROCATA VEL VINUM OPII CROCATA (SYDENHAM'S LAUDANUM).

	Parts
Opium, in coarse powder .. .. .	15
Saffron .. .. .	5
Cloves .. .. .	1
Cinnamon .. .. .	1
Sherry, a sufficiency	

Macerate the ingredients in 100 parts of the wine for six days, strain, press and reserve the tincture; again macerate in 50 parts of wine for two days, strain and press. Mix the tinctures and filter, and make up the filtrate to 150 parts if necessary.

One part of opium in 10 is the common strength. The proportions of aromatics given are also fairly representative. The German Pharmacopœia tincture is made with spirit, not wine. Some Pharmacopœias order sherry and some malaga. The B.P. vinum opii is misleading. It is neither Sydenham's laudanum nor anything else.

## TINCTURA PHYSOSTIGMATIS VEL TINCTURA CALABAR.

	Part
Calabar bean, in powder .. .. .	1
"Spiritus dilutus," a sufficiency	

Make a tincture in the same manner as *Tinctura aconiti radices*, so that 10 parts of the tincture will represent 1 of the bean.

This is only half the strength of the French, but the same as the tincture of other Pharmacopœias. The menstruum is, however, weaker in alcohol than that generally used, so that the tincture will be somewhat stronger in alkaloid.

## TINCTURA SCILLÆ.

	Parts
Squill, dried and powdered .. .. .	2
"Spiritus tenuis," a sufficiency.	

Make a tincture in the manner directed for *Tinctura hyoscyami*, so that 5 parts of the tincture will represent 1 part of squill.

The general strength; but weaker than U.S.P. (1 in 6-6) and B.P. tincture (1 in 7-36).

## TINCTURA SABINÆ.

	Part
Savin-tops, in powder .. .. .	1
"Spiritus dilutus," a sufficiency.	

Make a tincture in the manner directed for *Tinctura aconiti herbae*, so that 10 parts of tincture will represent 1 part of savin-tops.

The B.P. tincture contains 1 of savin in 7-36 by weight.

## TINCTURA STRAMONII SEMINIS.

	Part
Stramonium seed, bruised .. .. .	1
"Spiritus dilutus," a sufficiency.	

Make a tincture in the manner directed for *Tinctura colchici seminis*, so that 10 parts of tincture shall represent 1 part of stramonium seed.

This tincture is only half the strength of the French. It is also weaker than the British, which is 1 in 7-36 by weight.

## VINUM COLCHICI SEMINIS.

	Parts
Colchicum seed, bruised .. .. .	1
Sherry .. .. .	10

Macerate the colchicum seed in the sherry in the manner directed for *Tinctura colchici seminis*. The product should weigh 10 parts.

Weaker than the U.S.P. wine, which contains 1 in 6-6.



## VINUM COLCHICI CORMI.

	Part
Colchicum corm, in powder .. .. .	1
Sherry, a sufficiency.	

Macerate the colchicum in  $3\frac{1}{2}$  parts of the wine for six days, then strain, press, and reserve the liquor. Again macerate for two days in  $1\frac{1}{2}$  part of wine, strain and press. Mix the liquors and filter, making up the filtrate to 5 parts with sherry if necessary.

Same as the B.P., double the strength of the French, and only half the strength of the U.S.P. wine.

## VINUM IPECACUANHÆ.

	Part
Ipecacuanha root, in powder .. .. .	1
Sherry, a sufficiency.	

Macerate in the manner directed for *Vinum colchici cormi*, so that 10 parts of the product shall equal 1 part of ipecacuanha.

This agrees with most of the Pharmacopœias. It is double the strength of the B.P. wine. The U.S.P. preparation contains 7 per cent. of ipecacuanha as liquid extract, and it would be a great advance and a distinct advantage if a process similar to the U.S.P. one were followed. An acetous extract would be preferable to a plain liquid extract.

## VINUM ANTIMONIALE VEL VINUM STIBIATUM.

	Parts
Tartarated antimony .. .. .	1
Sherry .. .. .	249

Dissolve.

This is weaker than the B.P. wine (1 in 214), but it agrees with nearly all others. The Russian preparation is made with malaga.

## PHARMACOPÉE INTERNATIONALE.

L'origin et le développement du projet pour une pharmacopée internationale ont pris naissance en même temps que le Congrès pharmaceutique international. Depuis longtemps on la désirait, mais ce n'est qu'en 1867 qu'on en a parlé au congrès tenu à Brunswick, et alors seulement comme un vœu "pour l'uniformité dans les prescriptions pharmaceutiques galéniques." Rien ne fut fait pour accomplir cet objet; on avait seulement dit qu'une pharmacopée universelle serait une bonne chose, mais à Paris en 1869 le Congrès avait devant lui une "proposition formelle" à ce sujet. Le premier pas était pris et la Société Pharmaceutique de Paris fut chargée d'en prendre soin et de préparer la pharmacopée. Deux ans plus tard, au Congrès de Vienne, on adopta une résolution "qu'il est à désirer que ce travail soit bientôt achevé," et à St. Pétersbourg enfin, en 1874, la Société de Paris dépose sur le bureau une pharmacopée manuscrite. En même temps on règle plusieurs préliminaires, on remercie la Société de Paris pour le mal qu'elle s'est donné et le Congrès reconsidère tout le sujet, surtout les principes d'après lesquels on avait travaillé jusqu'alors.

Quand le Congrès vint à Londres en 1881, on abandonna enfin la Pharmacopée et on forma le projet de "rendre égale la force des préparations officielles pharmaceutiques contenant des drogues potentes." Nous avons observé alors "que le résultat voulu est tellement important qu'il sera peut-être plus facile qu'il ne le semble d'abord de faire quelque chose avant le prochain Congrès de Bruxelles." Ce Congrès doit avoir lieu le mois prochain et la Commission sera appelée à rendre compte de son mandat. Nous espérons qu'elle pourra faire un rapport satisfaisant, qu'un projet sera déposé sur le bureau, mais nous devons avouer que nous n'avons pas grand espoir. Les idées représentées dans la Commission varient tellement que l'on peut croire que même maintenant on n'a pas encore établi une base pour une dis-

cussion pratique. Que ceci soit vrai ou non, nous profitons de l'occasion d'une circulation quelque peu internationale pour soumettre, comme notre part à cette discussion, un projet d'une Pharmacopée internationale. Quelque imparfaite qu'elle soit quant aux détails, nous savons cependant qu'elle contient ce que beaucoup de pharmaciens anglais considèrent rempliraient toutes les conditions nécessaires.

Tout le monde est d'accord qu'une pharmacopée internationale devrait être imprimée en Latin; on n'aurait pas besoin d'une grande édition officielle, car l'industrie particulière produirait de bonnes traductions dans les différentes langues.

Quant à la nomenclature, il est très important d'adopter un bon système. Quant aux poids et mesures, le système anglais de mesurer des liquides est exceptionnel; la règle est de peser tout. Les deux systèmes dans la pratique remplissent le même but, quoique nous sommes portés à croire qu'il est beaucoup plus facile de mesurer un liquide que de le peser; mais ceci est un sujet où l'expérience et l'opinion doivent décider. Nous abandonnons la mesure et nous adoptons le poids parce que c'est la règle.

Dans nos formules toutes les quantités sont données en *parties par poids*, et on peut ainsi se servir de n'importe quel système de poids. On doit entendre que toutes les préparations chimiques sont tout à fait pures. Nous n'introduisons pas des bases végétales dont la composition est douteuse; il sera temps de les adopter lorsque leur composition chimique sera complètement connue. Nous ne décrivons et ne parlons de drogues crues que lorsqu'il est nécessaire.

Enfin, nous prions nos lecteurs de se rappeler que ceci n'est qu'une esquisse d'une pharmacopée internationale, mais cependant nous ne l'avons pas préparée à la hâte, nous avons pris chaque préparation selon son importance, nous avons laissé de côté quelques-uns qui n'ont qu'une importance tout à fait locale. Nous voulons faire observer que si on adopte jamais un projet semblable, il faudra abandonner toutes les différences d'opinion, et que tous les pharmaciens devront avoir foi en ceux qu'ils nomment pour faire ce travail.

Quelques-unes des préparations que nous considérons devraient être adoptées dans une Pharmacopée internationale sont décrites aux pages citées.

## INTERNATIONALE PHARMACOPŌA.

Gleichzeitig mit der Entwicklung des Internationalen Pharmazeutischen Congresses ist auch die Ausbildung des Vorschlags einer Internationalen Pharmacopŏa.

Zum ersten Mal wurde dieser, schon längst als wünschenswerth erkannte, Gegenstand auf der Congress-Versammlung zu Braunschweig, 1867, in den Bereich der Verhandlung gebracht, allerdings nur als Wunsch für "Gleichförmigkeit in den Vorschriften für galenische Pharmazeutische Zubereitungen." Zur Ausführung des Vorschlags wurden keine weiteren Schritte genommen als festzustellen dass eine Allgemeine Pharmacopŏa nützlich und wünschenswerth wäre. In Paris, 1869, wurde dem Congress ein bestimmter Vorschlag in der Sache vorgelegt, somit war die Schaafe durchbrochen und das Kŭchlein wurde dem Pharmazeutischen Verein in Paris anvertraut. Zwei Jahre später, in Wien, wird ein "Wunsch für die baldige Vollendung des Werkes" ausgesprochen; und 1874, in St. Petersburg, legt der Pariser Verein eine geschriebene Pharmacopŏa vor; zugleich wurden



verschiedene "vorläufige" Beschlüsse gefasst, dem Pariser Vereine für die gehabte Mühe Dank gesagt, und die ganze Sache, vornemlich die bis dahin befolgten Grundzüge, einer neuen Berathung durch den Congress unterzogen.

Als sich derselbe 1881 in London versammelte wurde die Pharmacopöa gänzlich aufgegeben, und an deren Statt ein Vorschlag gemacht für die "Gleichstellung des Stärkegrades von Präparaten, welche nachamtlichen Pharmacopöen bereitet werden, und kräftigwirkende oder schädliche Arzneimittel enthalten."

Wir haben schon damals hervorgehoben "dass das zu erreichende Resultat so augenscheinlich wünschenswerth sei, dass es leichter sein möchte, als angenommen wurde, Etwas zu erzielen ehe sich der Congress in Brüssel versammelt.

Diese Versammlung soll nun nächsten Monat stattfinden, und wird von dem Ausschusse ein Bericht über seine Thätigkeit verlangt werden. Wir wollen hoffen dass derselbe befriedigend ausfallen und Etwas Wesentliches dem Congress vorgelegt werden wird, müssen aber eingestehen dass wir nur wenig darauf zählen. Die Ideenrichtungen welche im Ausschusse vertreten sind, gehen so himmelweit auseinander, dass Raum für die Befürchtung ist, es möge bis Heute noch keine gemeinschaftliche Basis für nützliche Verhandlungen erreicht sein. Wie dem auch sein mag, es schien uns zweckmässig die Gelegenheit einer einigermaßen internationalen Verbreitung zu benützen, um als Beitrag zu der Verhandlung, einen Entwurf einer Internationalen Pharmacopöa vorzulegen, welcher, obwohl er im Detail mangelhaft sein mag, wie wir wissen, redlich dasjenige umfasst welches, in der Meinung vieler Britischer Pharmazeuten, allen biligen Forderungen entspricht.

Alle stimmten dahin überein, dass eine Internationale Pharmacopöa in lateinischer Sprache gedruckt werden sollte. Eine grosse officielle Auflage wäre nicht nöthig, da Privatunternehmer für gute Uebersetzungen in die verschiedenen Sprachen sorgen würden.

Es ist von grösster Wichtigkeit dass der Nomenclatur ein gutes System zu Grund gelegt werde.

In Betreff der Gewichte und Maasse ist der Britische Gebrauch, Flüssigkeiten zu messen, ein ausnahmsweiser; die Regel ist, Alles zu wägen. Beide Verfahren führen in der Anwendung zu demselben Ende; obwohl uns dünken will, es ist leichter eine Flüssigkeit zu messen als dieselbe zu wägen, dies ist mehr Gewohnheitssache: setzen wir das Messen bei Seite und halten das Wägen fest weil es die allgemeinere Regel ist. Unsere Formeln geben alle Verhältnisse in Gewichtstheilen an, so dass jedes beliebige Gewichtssystem anwendbar ist.

Es versteht sich dass alle Chemicalien die möglichst reinen sein müssen. Wir führen keine organischen Basen an deren Zusammensetzung zweifelhaft ist. Es wird Zeit genug sein solche einzuführen wenn deren chemische Zusammensetzung ganz unzweifelhaft festgestellt sein wird. Rohe Arzneimittel werden nur wo nothwendig angegeben und beschrieben.

Schliesslich erinnern wir unsere Leser daran dass dies nur der Umriss einer vorgeschlagenen Internationalen Pharmacopöa ist, welchen wir jedoch nicht in Eile zusammengesetzt haben. Jede Präparation ist ihrem Werthe nach untersucht worden, einige welche kräftig aber nur von localer Bedeutung, sind ausgelassen.

Wir möchten noch hervorheben dass, wenn je ein derartiges Werk angenommen werden soll, alle Meinungsverschiedenheiten vorerst versenkt, und dem Ausschusse welcher zur Erledigung dieser Angelegenheit ernannt wird, seitens aller Pharmazeuten unbedingtes Vertrauen zu Theil werden muss.

## FARMACOPEA INTERNACIONAL.

El origen y desarrollo del proyecto son contemporáneos con el desenvolvimiento del Congreso farmacéutico internacional. Después de sentirse largo tiempo la falta de un arreglo parecido, se inició su discusión en el Congreso celebrado en Brunswick en 1867, pero en esa ocasión las proposiciones se limitaron á "uniformidad en las recetas para los preparados galénicos de la farmacopea." No se hizo paso alguno para llevar al cabo el proyecto, limitándose solo á la sugestión que una farmacopea universal seria muy ventajosa, pero dos años mas tarde el congreso de Paris formuló un proyecto definitivo sobre el asunto, y la Sociedad Farmacéutica de Paris fué encargada de su desarrollo. En 1872 el congreso de Viena se manifestó el deseo "de ver verificada la obra tan pronto como fuera factible," y luego en San Petersburgo en el año 1874, la sociedad de Paris formuló en manuscrito una farmacopea, arreglándose al mismo tiempo *varios preliminares*. La sociedad de Paris recibió los agradecimientos por sus trabajos y el Congreso volvió á considerar el proyecto especialmente en relacion á los pasos que ya se habian tomado.

Cuando el Congreso se reunió en Lóndres en 1881, se suprimió la cuestion de la farmacopea, iniciándose "la del igualamiento de fuerza de las preparaciones oficiales de la farmacopea que contuviesen drogas potentes."

Observámos entonces "que resultado á que se aspira es tanto de desear que su éxito resultará probablemente menos difícil de lo que parece de aqui al siguiente Congreso de Bruselas." El Congreso á que nos refiramos se celebrará en el próximo mes y se pedirá á la junta una relacion de sus trabajos. Esperamos que dicha relacion sea buena y que se formulará algo sólido, pero confesamos que nuestras esperanzas no son muy halagüeñas. Las ideas de la junta son tan variadas que dudamos si llegará establecerse una base para discusión práctica. Sea ó no verdad esto, nos aprovechamos de la oportunidad ofrecida por una circulacion hasta cierto punto internacional para someter como ofrenda á la discusión un proyecto para una Farmacopea Internacional, que, por imperfecto que sea en sus detalles, representa por lo menos todos los requisitos mas razonables bajo el punto de vista de los farmacéuticos británicos.

Todo el mundo está de acuerdo en que una Farmacopea Internacional debe ser en idioma latin; no seria necesario producir una grande edicion oficial, puesto que la empresa particular no dejaria de surtir buenas traducciones en los varios idiomas.

En cuanto á la nomenclatura, un buen sistema es de la mayor importancia. El sistema de pesos y medidas para líquidos adoptado en Inglaterra es excepcional, pues la regla general es de pesar todo. Ambos sistemas responden al mismo objeto en la práctica, al mismo tiempo creemos que es mas fácil medir un líquido que pesarlo, pero esto es cuestion de opinion y de experiencia. Nosotros dejamos las medidas en favor del peso porque es la costumbre establecida. En nuestras formulas todas las cantidades se expresan en *partes por peso*, pudiendo así elegir cualquier sistema de pesos.

Es de suponer que todas las sustancias sean absolutamente puras. No introducimos bases vegetales de composicion dudosa, ya podrán adoptarse estas cuando su composicion química no es dudosa.

Las drogas crudas se describen y mencionan solo cuando sea necesario.



Finalmente, nuestros lectores deben tener en cuenta que este proyecto no es mas que una sugestion para una Farmacopea Internacional; sin embargo, no lo hemos preparado con prisa: se ha tomado cada preparado conforme á sus méritos, omitiendo algunos potentes cuyo valor es puramente local. Debemos observar que si se llega á adoptar un sistema análogo, será á fuerza de suprimirse las opiniones contrariantes, debiendo los farmacéuticos en todas partes del mundo tener una fé católica en el cuerpo ejecutivo que sea elegido.

Las preparaciones que se conceptuan idéneas para una Farmacopea Internacional se hallan descritas en las páginas arriba mencionadas.

## VERDENS PHARMACOPŒIA.

Oprindelsen til Udkastet skyldes den Pharmaceutiske Verdens Congress. Den var længe anseet for ønskelig, men først drøftet paa Congressens Møde i Brunswick 1867, hvor Ønsket om "Lighed i Foreskrifterne for pharmacopœia galenical Tilberedelser" var almindeligt, men man gjorde intet Skridt til Sagens Fremme. Det var mere der en Indskydelse, at almindelig Pharmacopœia vilde være en god Ting; men Congressen i Paris i 1869 vedtog et "bestemt Forslag" an gaaende denne Sag, Isen var nu brudt og Forslagets Udførelse overdraget til det Pharmaceutiske Selskab i Paris. To Aar efter paa Congressen i Wien "Ønsket om Arbeidets hurtige Udførelse" var udtalt og Selskabet i Paris fremlagde paa Congressen i St. Petersburg i 1874 et Udkast til en Pharmacopœia; samtidig forskjellige forudgaaende Preliminariet blev afgjorte, Selskabet i Paris var takket for dets Uleilighed og Congressen overveide igjen hele Sagen, men i Særdeleshed de Udkast, den tidligere havde forhandlet.

Paa Congressens Møde i London i 1881 Pharmacopœia var afgjort opgivet og en Begyndelse gjort til "Lighed i Styrke af Pharmacopœial Tilberedelser indeholdende kraftige Materialier."

Ve bemærkede samtidig, at Öiemedet sigtet til var et saa almindeligt Ønske, at det vil vise sig lettere end det synes at drette Noget forinden Congressen i Brüssel. Denne træder sammen i næste Maaned og Commiteen vil blive opfordret til at aflægge Regnskab for sin Embedsførelse. Vi haabe at et vil blive et godt Regnskab, at noget Væsentligt vil blive fremlagt, men vi maa tiltsaa, at vi ere ikke sangvinke. Ieningerne blandt Commiteens Medlemmer variere saa betydeligt, at selv nu der mangler en Grund for practisk Drøftelse af Sagen. Enten dette er saa eller ikke vi have illadt os at benytte vor Verdens Circulation til, som et Bidrag til denne Drøftelse, at fremlægge et Udkast til en Verdens Pharmacopœia, hvilket, skjönt maaskee ufuldkomment i Omstændelighed, klart fremstiller, hvad ifølge mange engelske Pharmaceuters Mening vil møde alle billige Forringere.

Alle ere enige om, at en Verdens Pharmacopœia bør trykkes i det latinske Sprog. Et større Oplag vilde være nødvendigt, da privat Driftighed vilde sikkre gode Overbættelser i de forskjellige Sprog.

Med Hensyn til Navnefortegnelse, da er det af den største Ægtighed, at der vælges et godt System.

Hvad angaaer Maal og Vægt, da er det engelske System eller Maalet af flydende Vare forkasteligt. Det burde være en Regel at veie Alt. Begge Systemer ere practisk det samme, skjönt vi ere tilbøielige til at tro, at det er meget lettere at

maale flydende Vare end at veie dem. Dette er imidlertid kun en Meningssag.

I vort Udkast alle Quantiteter ere anførte i Vægt saaledes, at hvilket som helst Vægtsystem kan anvendes. Det er underforstået, at alle Chemicalier maa være uforfalskede. Vi ville ikke indføre vegetabiliske Stoffer af tvivlsom Sammensætning. Det vil være tidsnok at optage disse efterat deres chemiske Sammensætning er bragt udenfor Tvivl.

Raa Materialier ere kun beskrevne og nævnte hvor dette var en Nödvendighed.

Sluttelig ville vi erindre vore Læsere om, at dette kun er et foreslaaet Udkast. Men ikke destomindre er det ikke Hastværksarbejde. Ved enhver Tilberedelse vi have lagt Vægt paa dens Vigtighed, og udeladt nogle af kun underordnet Betydning. Vi ville foreslaa, at saafremt et saadant Arbejde nogensinde skal gennemføres, enhver Meningsforskjel maa først sættes tilside og Pharmaceuter, ligemeget hvor, have blind Tillid til Representanterne.

Tilberedelser, vi have troet ønskelige i en Verdens Pharmacopœia, findes paa de Paginaer, hvortil er henvist.

## Veterinary Pharmacy.

### DISTEMPER IN DOGS.

**I**f a dog is ill he is commonly supposed to have the distemper or be mad, and the general public make but little distinction. Distemper is common to most dogs as an infantile disease; rabies is very rare, and there are many experienced veterinary surgeons who have never seen a genuine case of the latter.

Distemper is a term which formerly implied any disease of a prevalent nature or epidemic to man or animals, but the meaning of the word has narrowed down in the present day to the exclusive use of dog *fanciers* and whitewashers, though why the washing of a wall should be "distemping" it none of the faculty seem able to explain. All the old works speak of animal plagues as "distempers," and the literature of the time of the plague of London often adverts to the "distemper now raging," &c.

It is as well to state that there is no specific for distemper, and the professional man who vends an infallible cure for it, elegantly prepared, is as great a humbug as the stable loafer who makes a secret of his magic art and steals quietly into the druggist's shop for a pennyworth of castor oil and syrup of buckthorn, with which he sometimes anoints the dog's nose and at others drenches him, preserving an air of mystery that is often infectious among better-bred spectators. Whether the anointing is followed up by incantations and genuflexions or any of those nocturnal sacrifices which induce the fairies to remove warts and moles from young ladies we cannot say, but should think it probable, and that the credit of the cure must be due more to the sacrificial offerings over the left shoulder, &c., than to the oil and rhamnus, as we know from practical experience that without *faith* the remedy mentioned is only an aperient.

Distemper may manifest itself at *any* period of a dog's life, as may measles in the human subject; but it is commonly met with in puppies from eight weeks to eight months old. It accompanies the process of dentition, and is generally most acute when the large corner teeth or canines are being cut. These teeth are called *tushes* or *tusks*, which is a convenient distinction, as it is fair to suppose that all a *dog's* teeth are *canine* teeth. They occupy the same position, or nearly, as do the canines in the human being, the *tushes* in the horse, and the largest and most prominent of the tearing teeth with which the *carnivora* are endowed.

Dulness and loss of appetite are usually the first symptoms



of distemper or any other illness with dogs, and a saline or other laxative at this stage will be safe and beneficial; say,

Mag. sulph.	..	..	..	..	..	3j. to 3iv.
Pot. nit.	..	..	..	..	..	gr. 5 to 3j.
Tinct. jalapæ	..	..	..	..	..	℥ x. to x℥.
Aq. ad	..	..	..	..	..	3ss. to 3ij.

Pro haustus.

In the course of a few days the symptoms will develop into one of three definite forms, in which either the respiratory, the gastric, or the nervous system will be most affected.

The commonest is that resembling measles, and to which infantile affection medical men have most often compared it. Here defluxion of mucus from the nose, overflow of tears, listlessness, hurried respiration, cough, and unwillingness to move soon combine to make the disease unmistakable. It is at this stage that treatment is the most hopeful, and should be directed to the abatement of symptoms rather than seeking for a specific to counteract a poison which cannot be found or an antidote to something the chemistry of which has not been ascertained. The dog's eyes and nose should be frequently bathed to keep them clear of the mucus, which dries and becomes a source of pain and irritation. The water for fomentation is improved by a minute proportion of carbolic acid and glycerine, as the former agent should deter the accumulated mucus from becoming foetid and the latter is calculated to soothe the excoriated membranes. In proportion of

Glycerinum	..	..	..	..	..	5ij.
Acid. carbolicum	..	..	..	..	..	℥ xv.
Aq. dest.	..	..	..	..	..	Oij.

M.

For this lotion, before leaving the patient for the night, a substitute of

Alum sulph.	..	..	..	..	..	gr. iv.
Zinci ox.	..	..	..	..	..	gr. x.
Vaseline	..	..	..	..	..	3j.

M. Ft. ung.

should be applied to the eyelids and nostrils and smeared down the cheeks to prevent scalding of the tears and accumulation of matter and consequent closing of the eyes. The eyes suffer ulceration and various other conditions consequent upon distemper, and of this we shall treat in another paper having reference to the diseases of the eye in general.

The before-mentioned remedies are merely palliative, and to sustain the dog in a tolerable degree of comfort; but if inflammation of the lungs follows, it is desirable to lose no time in applying counter-irritants to the sides of the chest—not in front, where the thick pectoral muscles cover the chest, but on the ribs from behind the elbow and above it to the last rib. Mustard answers as well as anything in most dogs, but in the long-haired varieties it is not so easily or effectually applied as lin. camph. co. or the preparation of white oils in common use, or

Lin. aconiti	..	..	..	..	..	5ij.
Lin. belladonnæ	..	..	..	..	..	5j.
Lin. camph. co.	..	..	..	..	..	3iss.

M. Ft. lint.

The last-named should also be rubbed into the throat, as there is often much swelling and pain and an inability to swallow. The cough is not, however, due to the throat; it is not a dry, harsh cough such as characterises laryngeal affections, but is a soft, husking noise, and indicates effusion into the chest cavity or matter within the air-cells of the lungs. Such cases, when not fatal, are often very long about, and are not calculated to bring much honour to the doctor. The best treatment at this stage is to give iodides with vegetable tonics. Iodide of potassium seems to produce or excite absorption of the effused matter better than anything else, but must not be given in conjunction with iron. The following is a good formula:—

Pot. iodid.	..	..	..	..	..	gr. j. to iv.
Ext. gent.	..	..	..	..	..	gr. ½ to ij.
Quinae	..	..	..	..	..	gr. ½ to 1
Excipient	..	..	..	..	..	q.s. ut ft. pil.

Capt. J. nocte manequæ.

The diet should consist of anything the dog will eat, including raw meat. He should be encouraged to move about a

little, his bed changed, and given access to plenty of fresh cool water.

The foregoing is usually the course taken by the disease, and, although there are three pretty well defined causes of distemper, they sometimes merge into one another, and the dog, with inflammatory lung symptoms, may at the same time have dysentery and fits.

The bowels should be kept regular by salines and enemata or ol. ricini, but the latter is not so lasting in its effect, and in the opinion of some good authorities is a positive astringent in its secondary effects.

After the urgent symptoms have passed and the dog is getting well, he may have a most distressing skin eruption coming up in great blotches or blains, giving out a sanious matter and drying up, or, if neglected, coalescing with other such spots and forming a large raw surface. It would seem to be an exertion or effort of nature to get rid of effete material over and above what the kidneys and other excretories are capable of performing, and is best treated by local antiseptics and internal oxygeration, if such a term may be used. Whether or not this theory is correct, certain it is that no remedial agents meet with the success compared with that of large and frequent doses of chlorate of potash; a small dog may have 5 grains three times a day, and a large one 15. An ointment should be daily applied to the sore places as follows:—

Acid. carbolic.	..	..	..	..	..	3ss.
Ung. zinci ox.	..	..	..	..	..	3ss.
Vaseline	..	..	..	..	..	3ss.

M. Ft. ung.

A liberal diet with boiled green vegetables will be found desirable.

The chlorate of potash treatment is improved by a little pot. nit. and carbo. liq., say 1 to 5 grains of pot. nit., according to size of dog, and the same or a little more of the carbo.

The gastric or intestinal form of distemper shows itself in sickness, purging, wasting, and prostration. In a certain sense it is its own remedy, and the morbid matter is thrown off in the stools; these, however, become bloody, the mucous membrane of the bowels is cast off in patches, and a condition similar to typhoid is established. The stomach loses power of digestion, and the intestines of absorption. Brunner and Peyers glands and the first part of the intestine generally become highly inflamed, and blood and mucus are constantly passed till the dog dies of exhaustion if no remedy is found capable of stopping it. Many have been tried, including, of course, the universal panacea of ol. ricini and syr. rhamni, also æthiops mineral, antim. nig., antim. tart., ipecac., chloride of sodium, &c., *ad lib. et ad nauseam*.

Careful investigation and experience proves that the successful treatment of this form of distemper is to modify without stopping the diarrhoea, to alter without arresting the secretions, to sheathe but not plug the intestines, to take away the labour of digestion by providing readily assimilated foods and to surround the animal with such comforts and care as would from time to time suggest themselves to any thoughtful and humane person.

To modify the diarrhoea small doses of alum. To alter the acid secretions small doses of sodæ carb. To sheathe the abraded membranes and protect the glands, bismuth. sub carb., and glycerine.

To reduce the labour of digestion, beef-tea, milk, and slops.

The following mixture of the foregoing will do well:—

Sodæ carb.	..	..	..	..	..	3j.
Bismuth. subcarb.	..	..	..	..	..	3j.
Alum. sulph.	..	..	..	..	..	3ss.
Glycerinum	..	..	..	..	..	3iv.
Aq. carui ad	..	..	..	..	..	3iv.

M. Ft. mist.

Dose—10 minims to 1 drachm every hour.

The nervous form of distemper is the worst to treat, and although it is reasonable to suppose that the fits and pals are in the first instance caused only by the circulation of impure blood to the nerve-centres, yet an examination of numerous subjects would show that only a short time elapses in producing those degenerations of the spinal cord which leave a dog with "the jumps," (chorea), or palsied, or subject to fits for life. Treatment, except in the early stage, is of



very little use, and should then be carried out with a view to divert blood from the spinal cord to the surface or intestines, or both. The application of a powerful irritant from the back of the head to the loins, such as mustard and acetic acid, or lin. camph. co., or ol. tereb., should not be delayed, and saline purgatives constantly administered. All the advantages of potass bromide as a sedative may be brought to bear on the irritable nerve-centres by giving it in small doses in conjunction with the salines,\* giving the dog moderate exercise, avoiding excitement, and looking carefully to the mouth to see if there are any teeth requiring to be removed. Dogs are subject to dentition fits similar to those of infants, and many an unfortunate animal has received the "happy dispatch" from the staff or heel of a heavy-booted policeman under the impression that the dog was mad, and if not a case of distemper, then, as we said at the outset, it must be madness, for the public only recognise these two things, and the chemist who will trouble himself to know better may benefit our good friends the canine race, the owners, and last, but not least, himself.

**ERRATUM.**—A serious error occurs on page 375 of our last number, by which an ounce and a half of antimonium tartaratum is ordered in a fever powder for grease in place of a brachm and a half. We recommend our readers to make the necessary correction in manuscript, as the error might lead to serious results. We are obliged to those correspondents who wrote to call attention to the matter.

### TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

### From the "Trade Marks Journal," July 15, 1885.

**LYNODYNE**, in white letters on a black ground, for a medicinal preparation for human use. Thomas Fletcher, 3 Ellin Street, Moor, Sheffield, veterinary surgeon. No. 37,682.

**THE ALDERNEY JERSEY FOR YACHTS AND BABIES.** NORMAN CONDENSED MILK COMPANY. Henry Howard, trading as the "Company," 21 Lime Street, E.C. No. 40,212.

**REMOR HORDEATUS**, in script-type, for a food for human beings or other animals. Loeflund & Co., 143 Fenchurch Street, E.C. No. 42,181.

**TIT-BITS SAUCE OR TIT-BITS RELISH.** TIT-BITS FROM ALL THE MOST DELICIOUS FRUITS AND SPICES IN THE WORLD, with label, &c. Robert Stobbs, trading as "Robert Stobbs & Co.," 35 and 36 Saville Street West, North Shields. No. 42,843.

**THE SAPOLINE COMPANY, BIRMINGHAM**, with coat of arms, for candles, soaps, starch glaze, &c. (No. 43,637); and for perfumed soaps and toilet articles (No. 43,638). J. J. Knight, trading as the "Company," Key Hill Drive, Hockley Hill, Birmingham.

**UNITED KINGDOM COFFEE COMPANY**, with coat of arms for coffee (No. 44,287). Francis Pritchett, jun., trading as the "Company," and also as the "United Kingdom Tea Company," 21 Mincing Lane, E.C.

**TRIPODA, FOR TENDER AND PERSPIRING FEET.** Spong & Son, High Street, Biggleswade. No. 44,586.

**D. CLIFTON, STOCKPORT**, with design and monogram, for mineral and aerated waters. No. 44,925.

**D. V. M.** and design, for photographic silver emulsions, dry plates, &c. (No. 45,056). Hortense Van Monckhoven, 117 Rue de l'Hôpital, Ghent, Belgium.

**ROSEFIELD'S CONDENSED SOAP.** John Crosfield, trading as "Josh. Crosfield & Sons," Warrington. No. 45,112.

**BIBBY'S MILK MEALS (No. 45,026); BIBBY'S MILK EQUIVALENT (No. 45,207),** for meals for calves. J. Bibby & Sons, Fleet Square Mills, Lancaster.

**MANX SHRUB**, a lotion. George Quarrie, Daltongate, Ulverston, Lancashire. No. 45,224.

**MANICURE SOAP**, with design, for toilet soap. No. 45,252. John Morgan Richards, 46 Holborn Viaduct, London.

**ELLIOT'S UNRIVALLED FRUIT SAUCE**, with label. Josiah Elliot, 128 and 129 Fore Street, Exeter. No. 45,278.

**Picture of an Eye**, for indiarubber surgical and curative goods (No. 45,287), and for other indiarubber goods (Nos. 45,288, 45,289, 45,290, 45,291, 45,292). The Indiarubber, Guttapercha, and Telegraph Works (Limited), 106 Cannon Street, London.

### From the "Trade Marks Journal," July 22, 1885.

**PROCTER'S LIQUID GLUE**, with a label, for cement for mending china, &c. (No. 41,367), and for glue (No. 41,368). John H. Winkelmann, trading as "J. H. Winkelmann & Co.," Baltimore, U.S.A.

**NORTH LONDON CHEMICAL WORKS**, and a picture of Ithuriel's spear, for chemicals used in pharmacy and medicine. Fletcher, Fletcher & Stevenson, North London Chemical Works, Holloway, N. No. 41,937.

**AROMATIC BITTERS, OR ANGOSTURA BITTERS**, and with signature and label in English, Spanish, German, and French. J. G. B. Siegert & Hijos, Port of Spain, Trinidad. No. 42,351.

**FIRM AS AN OAK, H. BOND'S MARKING-INK**, with engraving of an oak, for marking-ink (No. 42,893), used 37 years before 1875. James Christian, 44 Bevenston Street, Hoxton, N.

**THE GENUINE COMPOUND LIQUORICE WORM-CAKE**, with label, for worm-cake, and also aperient cake. W. R. Maud, Pontefract. No. 44,018.

**BERGER'S STARCH**, and picture of a Newfoundland dog, for starch. Samuel Berger & Co., Bromley-by Bow, London. No. 44,367.

**ALBION, THE CHALLENGE NON-INTOXICATING DRINK**, with a label. Arthur Allen, 78 High Street, Guildford. No. 44,528.

**NERVE-FOOD**, with signature, for a syrup of hypophosphites. Fred. J. Yeatman, 141 Kentish Town Road, London. No. 45,032.

**HUM-TAM**, for a non-intoxicating non-aerated beverage. Thomas Austin, 12 Tavistock Street, Hereford. No. 45,047.

**LISSELINE**, for preparations of vaseline for use in pharmacy and medicine (No. 45,059), and for toilet preparations (No. 45,060). E. A. de Pass, 3 Coleman Street, London.

**SUTHERS' COMPOSITION ESSENCE.** William Suthers, 17 Sidney Street, All Saints, Oxford Road, Manchester. No. 45,078.

**PEPTONISING POWDER** on picture of a tube, a medicinal powder for human use (No. 45,079), and for use as an ingredient of food (No. 45,080). Burroughs, Wellcome & Co., Snow Hill Buildings, Holborn Viaduct, London.

**SPONG & CO.'S NEW CHEMICAL FIRE-EXTINGUISHING BALL**, with a picture thereof (No. 45,201). James Osborn Spong, trading as "Spong & Co.," 226 High Holborn, London.

**MURDOCH'S LIME-JUICE SALINE**, a medicine for human use. Murdoch Brothers, 249 Sauchiehall Street, Glasgow. No. 45,228.

**BALMORAL SOAP**, for medicated soap (No. 45,240), and for perfumed toilet soap. Alex. Ogston & Sons, Aberdeen Soap and Candle Works, Aberdeen.

**SANTAS**, for articles of clothing. Farcy & Oppenheim, 35 boulevard Sebastopol, Paris. No. 45,258.

**THE RED CROSS POCKET AMBULANCE**, with design. Thomas Baron Russell, trading as "Russell & Everett," 1 Roehampton Street, Pimlico, London. No. 45,355.

**SABALINE**, a liquid dentifrice. William Cass Grayston, 11 Valley Bridge Parade, Scarborough. No. 45,366.

**A coat of arms for an antiseptic for preserving eggs.** Wind & Lassen, Souderburg, Germany. No. 45,395.

**THE LEICESTER**, for medical and surgical plasters. A. F. L. de St. Dalmas, 40 Belgrave Gate, Leicester. No. 45,461.

**ALCOCK'S ANODYNE HEALING PLASTER.** Edmund Charles Alcock, 10 Lambert Street, Liverpool. Used twenty years before 1875. No. 45,536.

**KALUDE** in M.S. on a black ground, a cure for gaps in pheasants, &c. (No. 45,544). James Chamberlin & Smith, Post-office Street, Norwich.

**KOMPO**, a non-alcoholic cordial. The firm trading as "J. F. White," 17 Vicar Lane, Leeds. No. 45,646.

### From the "Trade Marks Journal," July 29, 1885.

**THE WESTMINSTER FEEDING-BOTTLE**, with name, &c. The firm trading as "William Toogood," 35-37 Mount Street, Grosvenor Square, London No. 43,452.

**COCOASANT (No. 44,566)**, and the same repeated four times in a certain arrangement (No. 45,154), for a preparation of cocoa and milk. The Condensed Peptonised Milk Company (Limited), Verney Junction, Bucks. No. 44,566.

**BARNETT**, for pills and chemicals, used in medicine and pharmacy (No. 44,605), and for lavender-water and toilet articles (No. 44,606); used five years before 1875. Fred. Crossley, trading also as "Barnett & Co.," 5 the Colonnade, Barnsley.

**Picture of a Ruined Castle**, for a natural mineral water. Thos. J. Stafford Hotchkin, Esq., Woodhall Spa, Horncastle. No. 45,110.

\*Potass. bromid. . . . . 3j.

Pot. bicarb. . . . . 3i.

Mag. sulph. . . . . 3iij.

Aq. ad . . . . . 3i.

M. Ft. mist.

Dose—from 10 to 60 minims every four hours.



MAGICAL SOAP—USE IT IN HARD WATER OR SOFT WATER, OR HOT WATER OR COLD WATER, OR SEA-WATER, THE EFFECT WILL BE FOUND TO BE MAGICAL (No. 44,905); GOSSAGE'S MAGICAL SOAP (Nos. 44,903 and 44,909); The Magical (Nos. 44,907 and 44,908), for common soap (the lower numbers) and for perfumed soap (the higher). William Gossage & Sons, Widnes, Lancs.

ZENELOPHON, and a picture of a garden and tennis-court, for an aerated non-alcoholic beverage. Levi Chapman, 81 Gosford Street, Coventry. No. 45,015.

S. J. GITTOES, WEDNESBURY, and monogram, for aerated waters. Sim. Jas. Gittoes, 54 Lower High Street, Wednesbury. No. 45,279.

LOTOR WASHING POWDER with picture. Hy. Jos. Thomas, trading as the "Lotor Manufacturing Company, 29 Belvedere, Bath. No. 45,367.

PATOS, for an ointment. Samuel Pickman, 13 Shaftesbury Street, Eccles, Lancashire. No. 45,468.

BELFAST AND LONDON AERATED WATER COMPANY (LIMITED), and a label for aerated waters and ginger ale. 29 Bankside, London, S.E.

CROSS'S CORN AND HONEY FOOD, a farinaceous food. John Cross, 38 Oxford Street, Reading. No. 45,558.

OCTOPUS, an adhesive cement for bicycle tyres. Snell & Brown, 66 Skinner Lane, Birmingham. No. 45,659.

*From the "Trade Marks Journal," August 5, 1885.*

MACCLESFIELD, and a crown, for sulphate of copper, metallic salts, and alkalies (No. 42,757); used twenty years before 1835. John Hawke Dennis, 19 Castle Street, Liverpool.

HUDSON'S HALF-PENNY SOAP-POWDER, with a picture (No. 44,171); used sixteen years before 1875. HUDSON'S EXTRACT OF SOAP, with design (No. 45,155). The firm trading as "R. S. Hudson," Bank Hall Liverpool.

Picture of a Carter, for a non-poisonous preparation of silver for depositing a coating of pure silver on the worn parts of electroplated goods (No. 44,121). Carter & Co., 28 Clayton Road, Peckham, S.E.

INTERNATIONAL FEEDING-BOTTLE, with design. E. Brecht & Co. (Limited), 83 Upper Thames Street, London. No. 44,506.

FAIRY, for lamps (No. 44,537), and for candles, night-lights, &c. (No. 44,538). Samuel Clarke, Child's Hill, London, N.W.

SOOTIGINE, for artificial manure. New Carbolic Sanitary Company (Limited), Manor Place, Hackney, London. No. 44,768.

FAITHFUL AND TRUE TO THE LAST, with pictures of a sheep and a pair of scales, for a powder for cleaning brushes. Guillaume Lanfollain Muraille, 88 Seymour Place, Bryanston Square, London. No. 45,022.

CHAMONDY SAWMY (No. 45,026), RAMA-SAWMY (No. 45,027), KISTNA SAWMY (No. 45,028), VANAGOPAL SAWMY (No. 45,029), with mythological figures, for soaps, oils, &c. Oakes & Son, Wool Exchange Coleman Street, London.

FLOS-OLIA, for toilet articles, perfumed soap, &c. Kennedy & Co., Pittsburgh, Pa., U.S.A. No. 45,120.

SPARKHALL'S SPECIFIC FOR SPRUNG KNEES AND KNUCKLED FETLOCKS, with picture of a horse. Richard Hovell Sparkhall, 101 Trumbull Avenue, Detroit, Mich., U.S.A. No. 45,140.

ELLIOTT'S DEVONSHIRE SAUCE, with a label. Josiah Elliott, 123 and 129 Fore Street, Exeter. No. 45,277.

Picture of a Female Riding on a Tiger, for acids, alkalies, &c. W. Meyerstein & Co., 6 Love Lane, London, E.C. No. 45, 576.

*From the "Trade Marks Journal," August 12, 1885.*

KING'S COUNTY OILWORKS, 123 PEARL STREET, N.Y. FIRE TEST, 150°, WHITE ROSE. SONE & FLEMING MANUFACTURING COMPANY (LIMITED), for illuminating-oils. No. 41,020.

W. G. in monogram; SODA-WATER, with name and address on strap label, for aerated beverages. Waldron Griffiths, Cirencester. No. 44 341.

H. B. HILTON & BATES, NEWTON HEATH, MANCHESTER, in roughly-drawn italics, for aerated waters. No. 44,858.

MONAZONE, for an aerated and non-alcoholic drink. Jonathan White Johnson, Douglas, Isle of Man. No. 45,140.

STAMMER'S M. BRO. K. TION, RAPID RELIEF, with a design, for an embrocation for human use. Elizabeth S. Stammer, 40 West Green Road, South Tottenham, London, gentlewoman. No. 45,183.

MANX SHRUB, a chemical medicinal preparation for human use. George Quarrie, Daltongate, Ulverston, Lancs. No. 45,224.

STANDARD LEMONADE, MADE OF THE CELEBRATED CHROMAC WATER, &c. SCOTT & CO., HURST STREET, BELFAST, as a label for aerated waters. No. 45,229.

HARVEY'S SOVEREIGN CURE, with picture of a king in State robes. A medicine for human use. Daniel Morris Harvey, 21 Castle Road, Newport, Isle of Wight. No. 45,231.

WOLSTENHOLME'S LAUNDRY-CREAM, a preparation for laundry purposes. William Wolstenholme, Brunswick House, Macclesfield. No. 45,249.

CARRICK'S PETIONISED COD LIVER OIL AND MILK, with pictures of cod-fish and cow; a medicine for man. John Newton Beach, 24 & 25 Hart Street, Bloomsbury, London. No. 45,265.

BULL BRAND, with outline of a bull, for caustic soda and other chemicals. Widnes Alkali Company (Limited), Widnes. No. 2, 45,34

FLORESSA, a non-intoxicant aerated beverage. Miles McCulloch & Co., 79 Gamgad Road, Glasgow. No. 45,444.

Picture of a stork on a fan, with other details, for acids, alkalies, &c. W. Meyerstein & Co., 6 Love Lane, Aldermanbury, London.

PHENALINE SMELLING-SALTS, A CERTAIN CURE FOR COLD IN THE HEAD, HAY FEVER, HEADACHE, &c. Chave & Jackson, 6 & 7 Broad Street, Hereford. No. 45,581.

HARGREAVE'S PAINLESS CORN AND WART PAINT. J. Hargreaves & Son, 108 Fyde Road, Preston. No. 45,649.

A coat of arms, with name and address, for aerated waters. D. Clifton, Royal Oak Brewery, Stockport. No. 45,650.

STEVENSON'S TOOTHACHE PILLS, with picture of a serpent, &c. R. W. Stevenson, 19 Victoria Street, Derby. No. 45,663.

SHAVINGPAST, for shaving cream. Breidenbach & Co., 157B New Bond Street, London, W. No. 45,664.

TYLEE'S DIGESTIVE FOOD, with picture of Hercules. Harold Boutelle trading as "Tylee & Co.," 7 Bridge Street, Bath. No. 45,693.

Picture of two negroes crushing a lemon in immense nut-crackers for lemon squash, lime-juice, &c. James Pascall, 100 and 101 Blackfriars Road, S.E. No. 45,731.

Picture of an eagle on a tortoise as a seal, for chemicals used in medicine, &c. Haynes & Finnemore, 4 Whitfield Street, Finsbury, E.C. No. 45,747.

ACIDULATED TARAXACUM AND PODOPHYLLIN, A T. P. in a design, a patent medicine. Richard Springer Starkie, 126 Strand, London, W.C. No. 45,774.

BROMIDIA, with name and address on label, a hypnotic preparation. Battle & Co., St. Louis, United States. No. 45,813.

MURDOCH'S LIME-JUICE SALT. Marloeh Brothers, 249 Sauchiehall Street, Glasgow. No. 45,845.

ANODYNE AMYL COLLOID, with facsimile of signature, a preparation for neuralgia. Ferris, Boorne, Townsend & Boucher, Union Street Bristol. No. 45,863; used two years before 1875.

T. PALMER'S "EXCELSIOR" COIN AND WART REMOVER. Thomas Palmer, 1 Brown Street, Bryanston Square, London. No. 45,836.

INTERNATIONAL INVENTIONS EXHIBITION,  
LONDON, 1885.

THE following are the jury awards (issued subject to revision), published in a supplement to the *London Gazette* on Wednesday, August 12. When more than one award is made to the same exhibitor, he will receive only one medal of each kind.

*Gold Medals.*

Badische Anilin and Soda Fabrik...Improvements in the manufacture of colouring matters and intermediate products from coal tar

Beck, R. & J....Microscopic and other optical apparatus British Alizarine Company (Limited)...Improvements in the manufacture of alizarine, &c.

Brooke, Simpson, and Spiller...Improvements in the manufacture of coal-tar colours

Burt, Boulton, & Haywood...Boulton's patent improvements in creosoting timber

Cousins, John Ward...Highly ingenious surgical inventions Crossley Brothers...Gas engines.

Field, J. C. and J....Improvements in the manufacture of candles, &c.

Fletcher, Thomas...Gas fires and furnaces

Gaskell, Deacon & Co....Improvements in the manufacture of carbonate of soda, &c.

Hargreaves, James...Improvements in manufacture of sulphate of soda

Hicks, J. J....Improvements in thermometers and other philosophical instruments

Hilger, A....Improvements in philosophical instruments

Levinstein, I., & Co....Improvements in the manufacture of coal-tar colours

Oertling, L....Excellence in balances.

Ross & Co....Progress and excellence of work in the manufacture of lenses since the early days of photography, also microscopic and other optical apparatus

Sayce, B. J....Prominent share in the invention of the collodio-bromide process

Swan, J. W....Incandescent lamps

Swan, J. W....Part taken by him in the invention of carbon-printing

Young's Paraffin Light and Mineral Oil Company (Limited) ...Improvements in the manufacture of products from shale, and in lamps for burning mineral oils



*Silver Medals.*

Bell Brothers (Limited)...Manufacture of soda by Schloessing's ammonia process  
 Boake, A. & Co....Manufacture of sulphurous acid and sulphites  
 Brin Frères...Improvements in the production of oxygen and nitrogen gases  
 Calvert, F. C., & Co....Carbolic acid and allied products  
 Chapman & Messel...Improvements in the manufacture of anhydrous sulphuric acid  
 Collins, C. G....Excellence in manufacture and useful photographic appliances  
 Condry, H. B....Manufacture of permanganates, hyposulphates, &c.  
 Crouch, Henry...Improvements in microscopic apparatus  
 Davies, R. H....Pharmaceutical and chemical preparations  
 Denton, S. G....Improvements in thermometers  
 Duncan, J. and J. A. R., and B. E. R. Newlands...Alum process for removing potash from saccharine solutions, and improvements in the manufacture of sulphate of alumina  
 Eastman Dry Plate and Film Company (U.S.A.)...Apparatus for the production of negatives in the photographic camera from continuous rolls of paper  
 Eglinton Chemical Company...Production of chromates, "chromate" process of tanning  
 Folkard, Charles W....Air thermometer  
 Fordred, John...Malted food preparations, &c.  
 Gamble, Jos., & Sons...Manufacture of chlorate of sodium, &c.  
 Groves, William...Construction of electrical and philosophical apparatus  
 Hake, A., & Co....Fossil meal  
 Hare, George...Excellence in manufacture of photographic cameras  
 Hart, F. W....Various photographic apparatus, ingenious and of good workmanship  
 Hartley, Professor W. N....Spectrograph and spectrometer, with photographs of the spectra of metals  
 Hopkin & Williams...Fine chemicals  
 Howard & Sons...Pharmaceutical preparations  
 Hummel, M....Metallic thermometers for ordinary purposes  
 Kent, G. B., & Sons...Automatic brush-boring machine and brushes  
 Krobne & Seseman...General excellence of exhibit of surgical apparatus  
 Lactear, James...Improvements in alkali manufacture  
 Laing, P. A....Successful application of rapid filtration to military filters  
 Larrison & Co....Photographic apparatus  
 Laithland, G. R. & T. C....Improved process of manufacturing dentures from vulcanite and celluloid  
 Lay & Baker...Pharmaceutical preparations  
 Luspratt, James & Sons...Improvements in the manufacture of chloride of potassium  
 Macdonald, John...Apparatus for compression and liquefaction of gases  
 Mackard, Edward, & Co....Improvements in the manufacture of phosphoric acid and super-phosphates, and of cane sugar  
 Mouch, W. W., & Co....Improved camera and dry-plates  
 Nadler & Co....Improvements in the manufacture of nitro and bi-nitro benzol  
 Neclair, J....Chemical fire-engines, hose-coupling, and automatic sprinklers  
 Penford, E. C. C....Improved method of obtaining products from seaweed  
 Steward, James Henry...Optical apparatus  
 Ward, P....Illuminating-apparatus for surgical purposes  
 Waccato & Wolff...Trypograph, or multiple writer

*Bronze Medals.*

Albo-Carbon Light Company...Albo-carbon light-apparatus  
 Coutout-Tailfer and J. Clayton...Photographic dry plates  
 Baker, Charles...Student's microscopic apparatus  
 Olanachi's Chocolate Company (Limited)...Improvements in manufacture of chocolate  
 Burghardt, Dr. A. C....Condenser for volatile liquids  
 Chemical Papers Company (Limited)...Antiseptic papers  
 Bristy, Thomas & Co....Pharmaceutical preparations  
 Pocking, John T....Poroplastic  
 Bellingham, R. M....Compressing-machine for blue, black-lead, &c.

Cordner, Allen & Co. (Limited)...Water-purifier  
 Coxeter, T. & Son...Apparatus for administering nitrous oxide gas  
 Dudgeon, R. E....Diving spectacles and pocket sphygmograph  
 Eiloart, A....Gas-tap for chemical apparatus  
 List, Adolph (Germany)...Saccharine made from coal tar  
 Mackey, Mackey & Co....Preparation of salts of cerium for medicinal purposes  
 Matsumoto, Tshizayemon...Use of whale sinews for ligatures  
 Midford Fuller's Earthworks (Limited)...Improvements in the preparation of fuller's earth  
 Morgan & Kidd...Argentio gelatin-bromide process for photography  
 Pasteur, M....Patent filter  
 Patent Porous Carbon Company (Limited)...Carbon for deodorising and decolouring  
 Richardson, Dr. B. W....Apparatus for extinction of life  
 Richford, E. M....Rubber stamps  
 Ross, Lieut.-Col. W. A....Improvements in blow-pipe analysis  
 Rubber Stamp Co....Stereotyping in rubber by a dry process  
 Samuels, T....Apparatus to be fitted to the photographic camera for holding and exposing dry-plates  
 Sands & Hunter...Adaptation of various improvements to photographic apparatus  
 Smith, Powers & Co....Rotary bottle-cleaning machine  
 Spiller, A....Gelatin-chloride of silver transparencies, developed with hydroxylamine  
 Stollwerck Brothers (Germany)...Improved chocolate manufacturing apparatus  
 Thompson & Norris Manufacturing Co. (Limited)...Improvements in the manufacture of corrugated paper as a packing material  
 Toughened Glass Company (Limited)...Toughened glass

*Society of Arts Medals.*

Crossley Brothers...For the "Otto" gas-engine. (Medal offered under the Howard Trust)  
 Badische Anilin und Soda Fabrik...For their improvements in the manufacture of colouring-matters, and intermediate products from coal tar  
 William Crookes, F.R.S....For his improvements in apparatus for the production of high vacua, and for his invention of the radiometer. (Medal offered under the Fothergill Trust)

*Personalities.*

MR. A. H. YOUNG, M.B., of Salford, brother to Mr. J. Rymer Young, of Warrington, has been appointed Professor of Anatomy at Owen's College (Victoria University).

DR. F. J. B. QUINLAN, Professor of Materia Medica in the Catholic University Medical College, Dublin, &c., has been appointed delegate to the same Congress by the King and Queen's College of Physicians, Ireland.

MR. MASON, of Newball & Mason, Park Row, Nottingham, has taken into partnership at the other business, 10 Derby Road, Nottingham, Mr. J. S. Radford, for some years in the establishment of Messrs. Hooper & Co., Covent Garden. The new firm will carry on business under the style of Mason & Radford.

At a special meeting of the Executive Committee of the British Pharmaceutical Conference held on July 15, Messrs. Atkins, Brunker, Carteighe, Greenish, and Drs. Quinlan and Symes were appointed as delegates from the Conference to the International Pharmaceutical Congress at Brussels, and it was decided that they should be furnished with letters of introduction from the President of the Conference to the President of the Congress.

THE WILL (dated Feb. 10, 1885), with a codicil (dated May 2 following), of Mr. William Cooper, late of Berkhamsted-Saint-Peter, Herts, manufacturing chemist, emery-grinder, and painter, who died on May 20 last, was proved on the 22nd ult. by Richard Powell Cooper and Herbert Henry Cooper, the nephews, and William Henry Hobson, the executors, the value of the personal estate amounting to over 57,000*l.* The testator leaves numerous and considerable legacies and annuities to his own and his late wife's relatives, persons in his employ, servants, and others. The residue of his real and personal estate he gives to his said two nephews.





OFFICE—42 CANNON STREET, LONDON, E.C.

## “SANITAS.”

### THE BEST DISINFECTANT.

Non-Poisonous. Colourless. Gives no Stain. Fragrant.

Fluid Oil; Emulsion; Powder; Hard, Soft, Brown Windsor, and Toilet Soaps; Soap Powder; “Sanitas-Vaseline”; Veterinary Ointment; Tooth Powder; Toilet Powder; Toilet Fluid; Furniture Cream; Antiseptic Gauze; Fumigators.

**GOLD MEDAL, CALCUTTA, 1883-84.**

*Liberal Terms, Show Cards, and Bills to the Trade.*

Sole Manufacturers, **The “Sanitas” Co., Limited, Bethnal Green, E.**  
C. T. KINGZETT, F.I.C., F.C.S., *Managing Director.*

SEE SEABURY & JOHNSON'S Advertisement of INDIA-RUBBER POROUS AND SPREAD PLASTERS on page 145.



THE  
ONLY PURE  
AND  
PALATABLE  
APERIENT.

### HUNGARIAN NATURAL MINERAL WATER.

HUNGARIAN APERIENT WATERS have long ago superseded the antiquated German varieties, half the Salts of the latter being USELESS CHLORIDES (chiefly common Salt), whereas the Salts of ÆSCULAP WATER contain NINETY PER CENT. OF PURGATIVES.

ÆSCULAP is the ONLY Hungarian Water advertised to the public, all others having yielded to its UNDOUBTED SUPERIORITY.

THE ÆSCULAP BITTER WATER COMPANY, LIMITED,  
38 SNOW HILL, LONDON, E.C.; and BUDA PESTH.



18s. per cwt. net, bag included; in 7, 14, 28, 56 lbs., 20s. per cwt., delivered free in London, and in 1 lb. Tins, 5s. per doz. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated.



In 7-lb., 14-lb., 28-lb., 56-lb., and 1-cwt. bags, 28s. per cwt., net, bag included, delivered free in London.



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**HAY'S SOLUBLE ESSENCE OF GINGER.** See page 64.

**HAY'S GINGER CHAMPAGNE.** See page 66.

**HAY'S SOLUBLE ESSENCE OF LEMON.** See page 66.

## EDITORIAL NOTES.

### THE SALE OF ARSENIC.

THE legal cases of the month affecting the drug trade are of considerable interest and importance. Among these will be noticed the action defended by the Chemists' Trade Association, brought against Mr. Wheeler, of Guildford, for infringement of the Arsenic Act. That Act requires that in selling arsenic the purchaser shall be known to the seller, or shall be introduced by a witness who is known to the seller and who knows the purchaser. In the case reported, Mr. Wheeler knew by sight the woman who purchased the arsenic from his shop, and who afterwards poisoned herself with it; but he evidently did not know her name, as she gave him a wrong one, which he accepted and entered. The chief legal question involved was whether this acquaintance by sight was sufficient to justify the sale of the arsenic without a witness. The magistrates concluded it was not, and we are by no means disposed to quarrel with their judgment. Acquaintance “by sight” is too vague a form of knowledge to depend upon, and does not seem to satisfy either the spirit or the letter of the



law. Mr. Glaisyer, in defending this case, had an uphill task, and it is not, perhaps, surprising that he should have raised the point that the owner of the business was not the actual seller of the arsenic, the transaction having been conducted by an assistant. The 17th section of the Pharmacy Act expressly provides that, for the purposes of that section, "the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller," but there is no such modification of terms in the Arsenic Act. On this point, as we understand, a case has been granted by the magistrates. Curiously it happens that we report in this same number the actual success of just such a defence which has been raised against the Pharmaceutical Society of Australasia.

Another arsenic question of much greater importance than the one just alluded to is raised by an extraordinary case of suicide at Birmingham. A workman who had risked his little fortune on some horse-race, and had lost, sought the consolation which alcohol could afford, but this proving insufficient, resolved on the ultimate step of despair. He went to a chemist and tried to purchase threepennyworth of arsenic, but was refused; and besides, the chemist, who had reason for suspecting the man's intention, did what he could to frustrate it. The man, however, after some preliminary difficulty, did succeed in obtaining for his threepence no less than a pound of arsenic from a drysalter's shop in the district. It is true he had to give some sort of proof that he wanted the poison for use in his business, but it does not appear that a written order, which which was at first asked for, and which the law requires in cases of wholesale dealing, was insisted on. We understand that a prosecution is pending in reference to this transaction. If it be carried out it is to be hoped that the issue raised will be the definite and important one in regard to wholesale dealing. Possibly a conviction might be obtained on the ground of insufficient labelling, or on that of supplying without a written order. But the point we should like to see settled is whether such a transaction as the one reported, even had the representations of the purchaser been genuine, was legally a case of wholesale dealing. It is ridiculous to have a law to check the sale of grains or ounces of poisons, and to leave almost free the distribution of pounds.

### THE MINOR EXAMINATION.

We published in our June and July issues reports of the experiences of candidates at the Minor Examination. In this issue we are able to give a third report. Some apology is due to the majority of readers for printing so much on this subject. The examination has not, however, before been fully described, and it will be recognised that to young men who have it before them every scrap of information concerning it of interest, and possibly of service. The latest article describes the examination of July last, and we think this, taken with the preceding narratives, will suffice to furnish as full an account of the methods in which candidates are tested as can be desired.

All of our three contributors appear to us to have given unbiased accounts of what actually occurred from start to finish. Each has, so far as we know, written independently of the others, and, as different examinations are described, the series may be taken to give an idea of the variety, as well as of the scope and character, of the examination.

The general impression conveyed by the three articles is that the examination is as fairly conducted as is possible in the time available; but what we particularly gather from the accounts before us is that in one of the most essential sections of the examination, namely, that of dispensing, the test applied is both insufficient as a guarantee of competence

and unfair to the candidate. One of the reporters tells us that the time occupied in examining him in dispensing was three-quarters of an hour. That would be more than enough if it were only a matter of question and answer. But what is wanted is that the examiner should watch the candidate at work. The latter ought to have fair time to become familiar with his surroundings, and to overcome the perhaps unwonted clumsiness which may so easily result from unfamiliarity with his exact tools, as well as from nervousness. Then, when settled down, it does not seem to be nearly sufficient to give merely a pill and a mixture to be dispensed, which was what each of our contributors was tested with. The examiner, too, it appears, was so fully occupied with too many candidates at once, that one narrator seems to have had the opportunity of changing labels on a bottle without being observed. It is not very difficult now to understand how it happens that examination is such an insufficient test as it has been declared to be.

It must not be forgotten that the criticisms of our three friends are considerably blunted by the successful result of their attempts. Two other correspondents present the other side of the shield. Their indignation has been excited respecting some comments made by one of the writers already referred to—comments which were perhaps a little too general, but which were doubtless true in the main. But the important feature of the letters now published is, we take it, the corroborative evidence afforded that under present conditions the Minor Examination is necessarily a hurried and consequently a more or less defective one. We hope that this view, which we think must be the conclusion drawn by any unbiased reader of all the articles alluded to, will be either satisfactorily refuted, or will result in such modifications as shall, with or without a curriculum, tend to make the examination a fair, sufficient, and uniform test of the practical knowledge of chemists and druggists.

### ALLEGED ILLEGAL ACTION OF THE PHARMACEUTICAL SOCIETY.

LAST month we reviewed a pamphlet by Mr. George Tanner Hough—in which certain regulations and by-laws enacted by the Pharmaceutical Society in reference to the examinations intrusted to them are vigorously arraigned from the point of view of the public. It may or may not be politic for the leaders of the Society to ignore this impeachment as long as they can; but, if we are correctly informed, it will be prudent on their part to be ready with a defence, as it may be needed before very long in high quarters. It is reported that a prominent Member of Parliament has intimated his determination to raise in the House of Commons the question of the alleged illegal conduct of the Pharmaceutical Society, if, as is very likely, he should occupy a seat in the House next year. Whatever answer there may be to the charges, a clever advocate might unquestionably make an effective attack on the proceedings of the Society, on the lines laid down in Mr. Hough's pamphlet.

The Pharmacy Act of 1868, argues this author, was a disabling Act. Previously the trade of the chemist and druggist was governed by the common law, and the common law favours freedom of trade to the utmost; so much so that an action will lie against any man who prevents another from following his calling. This disabling Act must therefore be construed strictly. Neither the Pharmaceutical Society nor the Privy Council, nor both acting conjointly, can legally introduce additional terms of disability into an Act of Parliament and enforce them against the public. And yet this is what they have done. They are empowered *and required* to



examine all such persons as shall tender themselves for examination; examination is the sole condition instituted by Parliament as binding upon any person who wishes to call himself a chemist and druggist and trade as such; but the Pharmaceutical Society, with the sanction of the Privy Council, has already added to this requirement by requiring proof that a candidate has attained the age of 21, has passed a certain preliminary examination, and has been practically engaged for three years in the translation and dispensing of prescriptions; and now by new by-laws they are seeking to impose additional disabilities on the people. Mr. Hough maintains that any person without complying with the supplementary conditions imposed by the Pharmaceutical Society could obtain a mandamus to compel the Society to examine him, while beyond that he asserts that anyone who has been put to loss in consequence of the illegal by-law already mentioned could recover damages against the Society.

The question of the desirability of a three years' training, or of a curriculum, does not occur here. We may be fully convinced of the importance of these, but our confidence in that respect does not justify the imposition of our requirements as if we had already secured for them the sanction of the legislative authority. The Pharmaceutical Society had a right to make conditions in regard to its examinations while these were merely optional and honorary, but in regard to the examination which the Pharmacy Act requires the duty of the Society is quite simple. It may go to Parliament with its arguments, and establish if it can the proposition that an examination without a previous curriculum is not a sufficient protection for the public; but failing Parliamentary sanction, the Society cannot legally impose any such extra disability merely by a vote of its own members. Mr. Hough says of the Society:—"Immunity in the illegal course it has already taken is giving it greater boldness; and if it is permitted to proceed in the manner it now proposes, it will very soon be more difficult for a man to become a chemist and druggist than it is for him now to go through the eye of a needle or to enter the kingdom of Heaven."

We do not altogether endorse Mr. Hough's arguments and opinions; but we should be neglecting our duty if we did not call attention to them, and we may add, in conclusion, that they deserve an authoritative answer.

### POISON AND OTHER LABELS.

A CORRESPONDENT of *Chambers' Journal* for July urges, and the editor agrees with him, that no poison should be allowed to be retailed without being accompanied by clear indications of the appropriate remedies to be used in case of mishap, and of the subsidiary treatment to be adopted.

These instructions might form an integral part of the label in some cases, and, where the bottle was too small, could be folded in a small cardboard pill-box sort of appendage, to fit like a cap—or, rather, like a shoe—on the base of the bottle, and which could be made to fit very tightly, or be gummed on the bottle itself.

The practice of giving as much information as possible on the label is a growing one, and is much to be commended. A chemist can exercise a great amount of skill, and will assuredly enhance his reputation by providing suitable information on his labels. The extra cost of two or three lines of type on a label is very trifling, but the result is very effective if the information conveyed is suitable. In regard to poisons the test for the labels should obviously refer to the means to be employed in case of accident, and we do not think it would be an unreasonable requirement in an Act of Parliament if such information on the labels were made obligatory. For labels of ordinary medicines the difficulty of the

Medicine Stamp Act occurs. To declare on the label what the medicine is considered good for renders the sale an illegal one unless the stamp be employed. But with some little ingenuity this difficulty can be avoided. If some chemists for the general good will devise original labels such as are suggested, we shall be glad to receive designs, and will willingly pay for such as we print; and it is probable that if any in the contemplated collection should seem to go near infringing the Medicine Stamp Act, we could obtain from the legal officers of the Board of Inland Revenue an authoritative assurance as to what would be permitted.

### THE ETYMOLOGY OF THE WORD "DRUG."

IN a recent number of the *Pharmaceutische Centralhalle*, Dr. Hermann Hager complies with the request of several colleagues to publish his views on this question. Without further preface he announces that the word *droge* (the German form of the English drug) is derived from the old Greek language, standing in relation with the Greek word *trochos*, and its diminutives *trochion* and *trochiskos*. In Old Latin these words appear with the same meaning as *trochus*, *trochum*, and *trochiscus*. *Trochos* and *trochus* signify round, disc-shaped, top-like things, that roll and spin easily. *Trochiscus* means the same—small grains, cakes, or discs. *Trochum* (plural, *trocha*) is also used in place of *trochus*, and corresponds to the Greek *trochion* (plural, *trochia*). The top with which boys played the Romans named *trochus*. When the Heruli and Rugi invaded Italy in the fifth century, these Germanic races absorbed the Latin language into their speech, transforming the hard sounds of *t* and *ch* into *d* and *g*. In the same way, when the monks brought the Italian word *tinta*, colour or ink, to Germany, it became changed to *dinte*.

The Old Latin words *trochus*, *trochi*, *trocha*, &c., became *droga*, which passed unchanged from Italian into Spanish and Portuguese. The French, to ensure the proper sounding of the *g*, placed a *u* after it, and adopted the word *drogue*. In Spanish the process was similar. While *droga* meant drugs and spices, the Spaniards called the spice trade *drogueria*, and the spice merchant *droguero*; as in their language *g* before *e* is sounded (guttural as) *ch*. According to the foregoing notes, the word *droga* is about 1,300 years old, and signifies still, "spices, grain, seeds, drugs, &c.," as these articles are sometimes round, cake-shaped, disc-like, top-shaped (e.g., *anthophylli*, *caryophylli*, &c.), and when thrown on a flat surface easily roll. Thus it signifies to-day what the old Romans meant by *trochus*, *trochi*, and *trocha*.

As the Germans from old habit were generally accustomed to adopt foreign words from the French, so they accepted the French *drogue*. Had they taken it from the Italian language fifty years earlier, they would have adopted *droge* as the right and most convenient form of the word.

So far Dr. Hager. But in spite of our respect for his eminent attainments in pharmacy, we must express our regret that he does not favour us with historical proofs of his theory, such as are always demanded in the present state of philological science. We have no proof of the existence of the word in any language before the fourteenth century, when it appears in the prologue of Chaucer's "Canterbury Tales," at line 428, *drogges*, *droggis*, or *drugges*. Next in point of time comes the reference supplied by Professor Flückiger to the "Dispensarium Magistri Nicolai prepositi ad aromatarios," printed first in 1490, and not compiled earlier than the fifteenth century. The word *drogua* is used repeatedly in this work. Further details are given in two articles, in THE CHEMIST AND DRUGGIST for 1882, pages 88 and 117.

The great gap between the fifth and the fourteenth century



does not of itself disprove the etymology proposed by Dr. Hager. But the laws of phonetic change throw much doubt upon it. Dr. Hager admits inferentially that *droge* is a foreign word adopted into German in comparatively recent times, *i.e.*, within the last century or two, so that it escapes the strict application of these laws. The English word *drug* is in a different position. According to rule, aspirates in Latin become medials in English; thin consonants in Latin become aspirates. Thus, *frater* becomes brother, *tres* becomes three, the aspirate *f* becoming the medial *b*, the thin consonant *t* becoming the aspirate *th*. Trochus by the same rules would become throg or thrug, and *drug* would correspond to a Latin or Greek word beginning with an aspirate. We believe it is impossible for a word like *trochus*, with one consonant an aspirate and the other thin, to become a word like *drug* where both are medials. If a form like *drogua* existed in the Latin dialects before the thirteenth century, it might have been adopted into English without change of vowels, as *theriaka*, through its diminutive *triaculum*, became our English word *treacle*. But so far we have no documentary evidence of the existence of the form at such an early date.

Of course there is plenty of time between the fifth century or the old Latin, and the fourteenth and fifteenth centuries when we first come across *drugges* and *droguas*, for the change of meaning from round, rolling, spinning things to dried aromatic and medicinal vegetable products; but we do not usually accept such a change without the evidence of intermediate shades of meaning, which is quite absent in this case. The true etymology we believe will be found in some of the middle German dialects of the ninth to the twelfth centuries, with the root-meaning dry or dried things.

### THE CHINESE OPIUM TRADE.

HITHERTO a chest of Indian opium, on reaching one of the Chinese treaty-ports, paid a customs duty which amounted to 30 taels. It was afterwards subject to another duty called *li-kin*, or transit due. This latter tax has been the source of much irritation. As soon as the Chinese dealer buys the opium from the foreign consignee he has to pay the *li-kin*. He proceeds with it inland. Within a few miles of the port he is stopped by a barrier, and has to pay another tax. If his journey is a long one he may reach another and another, having to pay a heavy tax at each. This system, besides limiting trade, has led to many civic corruptions, which, however, concern the Chinese Government more than the foreign opium-vendor.

The agreement signed on July 18 by the Marquis of Salisbury and the Marquis Tseng deals with this question, which was left in an unsatisfactory condition by the Chefoo Convention ten years ago. The basis of agreement was proposed by the Chinese themselves. So far as foreign opium is concerned, the *li-kin* barriers are swept away altogether. It is agreed that opium on arriving in China shall be deposited in bond with the Maritime Customs, and shall, before being released, pay the ordinary tariff duty of 30 taels per chest, and also a sum not exceeding 80 taels per chest in lieu of *li-kin*. The merchant therefore pays now 110 taels at once, and can then obtain a transit certificate for his opium, in virtue of which it is freed from any further tax or duty while in transit. The amount of this composition for the *li-kin* may seem excessive; but at Kelung and Foochow, for example, the tax at the port barrier alone is 86 to 90 taels, so that it is really smaller than what is actually paid, while the amount that might be enforced has hitherto been unlimited. The Chinese Government will get some considerable

advantages, not the least of which will be the gain to the Imperial Exchequer by receiving the amount at once without previous filtration through the hands of provincial treasuries and local officials.

Further, the Chinese Government undertakes that native-grown opium shall be taxed equally weight for weight *ad valorem* with foreign opium, the market value of the latter at the place of sale, less the 80 taels per chest *li-kin* duty, being taken as the basis of assessment. The agreement is to be in force for four years, and subsequently till twelve months' notice to terminate it has been given by either side.

### A LINK WITH THE PAST.

IN our obituary column appears the name of Mrs. Mariah Bramley, of Old Basford, who died on the second of this month at the age of 83 years. Until within about a fortnight of her death, Mrs. Bramley has been carrying on the business of a chemist and druggist, a considerable part of her business consisting of prescribing for simple ailments and children's complaints. She was a tall, comely old lady, and much beloved by the poor in the district where she resided. She was a member of the Society of Friends. She was the second wife of James Bramley, who died in 1865, in his 86th year, and it is a very interesting fact that he and she in succession had carried on the same business without alteration in style or fixtures for about 76 years. Mr. Robert Bardsley, of Manchester, who is the grandson of James Bramley, and one of Mrs. Bramley's executors, has found among her papers the medicine stamp licence granted to James Bramley, of Basford, on the twenty-second day of September, 1809, which he has kindly forwarded for our inspection. As this was issued before the passing of the Act which now regulates the sale of patent medicines, and which is dated July 28, 1812, it may be of interest to print a copy of it. It bears a 5s. stamp, and is headed with the Royal Arms, the letters "G. R.," and the words "Stamp Office," and reads as follows:—

"I, G. Smith, by Virtue of the Power and Authority granted to me by HIS MAJESTY'S COMMISSION appointed for managing the Duties arising by *Stamps on Vellum, Parchment, or Paper*, in Pursuance of the Statutes in such Case made and provided, DO hereby give full Power, Licence, and Authority unto Mr. James Bramley, of Basford, to sell *Medicines*; and this Licence is to continue in Force from the Date hereof until the First Day of September, 1810, and no longer.

"Given under my Hand and Seal this Twenty-second Day of September, One Thousand Eight Hundred and Nine.

"G. SMITH."

Licence for vending medicines within any part of Great Britain, except the cities of London or Westminster, borough of Southwark, limits of the two-penny post, or city of Edinburgh; also except within any other city, borough, or town corporate, or towns of Manchester, Birmingham, or Sheffield.

The new house of the Royal Colonial Institute in Northumberland Avenue, London, has just been opened for the reception of Fellows.

\* \*

The Metropolitan Hospital Sunday Fund has this year received a donation of 1,000*l.* from its originator, Dr. James Wakley, proprietor of the *Lancet*.

\* \*

According to the journal of the Statistical Society of Paris the annual commerce of the following countries averages for each inhabitant as under:—Belgium, 1,152*fr.*; Holland, 899*fr.*; England, 518*fr.*; France, 285*fr.*; Germany, 266*fr.*; United States, 153*fr.*; Austria-Hungary, 136*fr.*; Italy, 83*fr.*; Russia, 48*fr.*



The Royal Horticultural Society have announced their willingness to give advice and practical assistance to any of the colonies who may desire to exhibit specimens of their ornamental and economic plants at the Indian and Colonial Exhibition of 1886.

\* \*

The number of patents taken out in 1884 in the United Kingdom under the new Act was 17,110. The average of the two years 1882-83 was 6,100. Of the 17,110, residents in the United Kingdom applied for 13,511, while 1,181 applications came from the United States, 890 from Germany, 788 from France, 151 from Austria, and 114 from Belgium; Canadians applied for 61, and Australasians for 54. According to the Comptroller's report it appears that the fees charged, though showing a present falling off, are more than sufficient to cover expenses, while it is believed that renewal fees will in the future ensure an augmented income.

\* \*

From the same report it appears that by the extension of the scope of the Act as regards trade-marks, by admitting fancy words to registration, the work of the office has greatly developed. There were 7,104 applications for registration in 1884, against 4,105 in 1883.

\* \*

The London wholesale druggists who so liberally offered a month ago to pay carriage on the goods they supply feel hurt at the little gratitude which their sacrifice has evoked. Some of them have had letters complaining that no mention is made of returns, "but suppose the arrangement will apply to these also." One of them, who is not always quite as serious as his business ought to have made him, wrote in reply to one of his complainants, saying that he had not quite completed his arrangements about paying carriage on returns, as he first wished to organise a system of sending men to all parts of the country to pack these for customers free.



AND

### Literary Notes.

*Illustrated Lectures on Ambulance Work.* By R. Lawton Roberts, M.D. London: H. K. Lewis.

THESE lectures were delivered by the author to ambulance classes held in connection with several collieries and iron-works in North Wales. They are based on the syllabus of instruction issued by the St. John Ambulance Association, and form a most useful supplement or substitute for the lectures given under the auspices of that valuable institution. The author first makes clear the framework and the organs of the body, giving some idea of the processes of life. This is followed by instructions for action in various emergencies, describing, with abundant and most satisfactory illustrations, methods of bandaging, arresting bleeding, setting fractures, and treatment in cases of fits, fainting, partial drowning, choking, poisoning, &c. The author has carried out his design most effectively, and has produced a work which would be useful in any library, but may be especially so on the chemist's book-shelf.

THE sixth number of "Drugs and Medicines of North America," the quarterly written and published by Messrs. J. U. and C. G. Lloyd, of Cincinnati, has just reached this country. The article on *Hydrastis Canadensis*, which commenced on page 76 of the third part, is completed on page 184 of the present one, the whole of Parts IV. and V. being devoted to a monograph on this plant. *Coptis trifolia* is the subject of the remaining pages. The work when finished will be a big book, and we hope the authors may both live to see their self-imposed task completed. We know of no other work which deals with the subject in a manner anything like so elaborate. Part VIII., which will be due in December, will complete the first volume, and will be accompanied by an index. Messrs. Christy & Co., of Fenchurch Street, London, and Mr. J. W. Owen, of 102 George Street, Hyde, are agents for this country.

## Scientific Notes:

*On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.*

### THE YIELD AND COST OF COCAINE.

DR. SQUIBB (*Ephemeris*, July, 1885) says the arrivals of coca leaves have been abundant, and the quality generally good. Assays of various samples gave proportions of alkaloid varying from .38 to .55 per cent., equal to 26.6 to 38.5 grains per lb. The latter should theoretically yield 43.36 grains of hydrochlorate, "but, although such coca has been worked, no such yield has been realised by the writer, and it is rather discreditable to have to say that not over 33 grains to the lb. has yet been reached, and this not as a general average." The price of coca leaves has been very uncertain for some time past, but it may be assumed "that good coca, giving an available yield of 33 grains to the lb., can now (June 29) be had at 50c. per lb." Dr. Squibb's calculation is, therefore, in English money:—

1 lb. coca leaves	..	..	..	..	..	2s. 1d.
Cost of extraction	..	..	..	..	..	5s. 0d.

for 33 grains, or say 2½d. per grain. Vial, label, and overweight in putting up brings this to 3d. per grain, to which he adds 2d. per grain for manufacturer's profit, as "such articles are not worth making unless the profit upon them be liberal, especially until the losses in acquiring a good process be fully compensated."

### ANÆSTHETICS IN THE MIDDLE AGES.

IN a paper read before the last meeting of the French Academy of Medicine M. Lagneau described his researches into the anæsthetics employed in Europe by physicians in the Middle Ages. That such were known is beyond any doubt. Abelard, speaking of the creation of Eve from a rib of Adam, speaks of the deep sleep which fell upon the latter as similar to that which physicians produce in patients upon whom they wish to operate. Pliny speaks of a stone of Memphis which, when crushed and treated with vinegar, renders any part to which it is applied insensible to pain; and many old authors speak of surgeons producing sleep in their patients before an operation by mixing with their food a decoction of the leaves or root of the mandragora, or some grains of the plant called "morion." Preparations of these two plants, as well as of other narcotics, were employed by surgeons down to the thirteenth and fourteenth centuries, but much less in subsequent times. Opium was also used for a similar purpose, while in the East the anæsthetic properties of hemp have been known from the earliest times. These were all taken into the stomach; but anæsthesia by inhalation was also known. Two different preparations were discovered in the thirteenth century: one by a Dominican of Rome, the other by a surgeon named Theodoric, who was also a preaching friar, and subsequently a bishop. Both of these were prepared from opium, henbane, mandragora, hemlock, and many other plants, and were inhaled from a sponge. It is, however, difficult to believe that preparations so little volatile could produce anæsthesia by simple inhalation. M. Perrin, who has studied ancient anæsthetics, has given the composition of a liquid which contains all the ingredients required for chloroform, and it is said that this was applied to witnesses or prisoners who were about to be tortured in the judicial tribunals of the Middle Ages. After inhaling it the unfortunate subject was plunged into a semi-comatose state, which diminished in a certain degree the pain of the torture. This liquid was always kept in a place adjoining the torture-chamber.—*Nature*.

### LINSEED TARLATAN.

M. LAILLIER, who has previously urged the preference of dry linseed meal to the crushed linseed with oil, suggests (*J. de Pharm. et Chim.*) the adoption of "linseed tarlatan" as a clean and convenient substitute for poultices. His method is to boil 1 oz. of linseed meal deprived of oil in water for ten minutes, so that the decoction shall measure about a litre. This is strained while warm through a hair



sieve, and (still while warm) a long piece of tarlatan is plunged in it and withdrawn, held out till the liquid ceases to drop from it, and then applied in several folds to the part where the poultice would be applied. It is covered over with some impermeable tissue. Antiseptics may be dissolved in the water if required.

#### ADULTERATION OF LEATHER.\*

DR. R. KAYSER asserts that leather is often spuriously adulterated with common glucose (starch sugar), having found in chamois leather 4.5 and 7.6 per cent., and in sole leather 2.7, 6.5, 5.2, and 7.2 per cent. of glucose. Leather is about eight or ten times dearer than glucose, and Dr. Kayser states that the presence of the latter in leather cannot be detected without the assistance of a chemical expert.

#### PARALDEHYDE AN ANTIDOTE TO STRYCHNINE.

ACCORDING to the *Chemiker Zeitung*, Professor Bókai, of Klausenburg University, has found paraldehyde to be an excellent antidote to strychnine, rabbits having been found to bear with immunity ten times the lethal dose of strychnine when the poison had been previously mixed with paraldehyde.

Chloraldehyde has often been used in cases of poisoning with strychnine, but this substance acts injuriously on the heart, which paraldehyde does not. In cases of human poisoning, Professor Bókai recommends a dose of from 6 to 10 grammes of paraldehyde twice daily until prolonged sleep sets in; but at present no case has occurred admitting of experiment. Herr Bókai further suggests the use of paraldehyde as an antidote to brucine, thebaine, and picrotoxine. Simultaneously with Bókai, Cervello and Dujardin-Beaumetz have likewise claimed the recognition of paraldehyde as an antidote to strychnine.

#### THE RELATIVE NUTRITIVE VALUE OF STEAMED AND BOILED POTATOES.†

ACCORDING to Professor P. Wagner, steamed potatoes are far more nutritious than boiled ones. With the latter not only is more water taken up, but also nutritious salts are extracted by the surrounding water. The author publishes analyses in support of his opinion.

#### THE COMMON SOW THISTLE A CAOUTCHOUC-YIELDING PLANT.

DR. GEORG KASSNER (*Archiv der Pharmacie*, July 1, 1885) has found that *Sonchus oleraceus*, a plant which also grows wild in England, contains  $\frac{1}{4}$  per cent. of caoutchouc. An extract of the plant was made by extracting with benzine, petroleum ether, or sulphide of carbon, and this crude extract then boiled with alcohol, which dissolved nine-tenths of the extract. The residue is the raw caoutchouc, which requires warming with an alcoholic solution of potash, and then washing with hot water. The residue consists of an elastic, somewhat dark, caoutchouc, which is partly soluble in ether, but completely so in sulphide of carbon or chloroform.

#### ON MEDICINE-TAKING.

THE time for taking a medicine must of necessity depend upon the nature of the medicine which is to be taken. The *Bull. gén. de Ther.* gives the following suggestive hints on the subject:—Locally-irritating medicines which contain substances such as iron, copper, zinc, or arsenic, especially when ordered in large doses, should be taken immediately after meals, whereas small doses of substances, which are intended to act on the mucous membrane of the stomach, should be taken fasting. In some cases the chemical composition of a medicine must be regarded. For instance, iodine and its salts must be taken fasting, since the presence of amylaceous substances and free acids would destroy their therapeutical properties. Acids prescribed for the purpose of correcting the gastric juice should be taken before meals,

so as to produce a copious secretion of the gastric glands during the meal. Alkalies intended to counteract the acidity of the stomach should be taken at meals, but when it is intended that they should be absorbed by the blood, they should be given fasting. Corrosive sublimate, tannin, alcohol, and some other substances, by acting upon the pepsine of the stomach, exert an injurious effect upon the process of digestion, in consequence of which any medicine containing any one of these substances should be taken fasting. Cod-liver oil, phosphates, and the like can be taken with the food.

#### ALUMINIUM ACETICO TARTARICUM AND ALUMINIUM ACETICO GLYCERINATUM SICCUM.\*

BESIDES carbolic acid and corrosive sublimate, 1 and 5 per cent. solutions of aluminium acetate are extensively employed in modern surgery. The dry salt has, however, been hitherto a desideratum. According to the *Deutsche. Med. Woch.*, No. 23, 1885, M. Athenstädt, pharmacist, of Bremen, has succeeded in making aluminium aceto-tartrate and aluminium aceto-glycerate, both of which contain aluminium acetate in the dry state, and keep well in tightly-closed bottles.

Aluminium aceto-tartrate forms lustrous crumbs resembling gum arabic, which smell of acetic acid and have a sweet astringent taste. Aluminium aceto-glycerate is a white hygroscopic powder, weaker in smell and taste than the former. Both preparations are readily soluble in cold water without decomposition, but hot water decomposes them. Aluminium aceto-tartrate is insoluble in alcohol and ether.

Dr. Max Schaeffer has employed the preparations with success in a number of cases of diseases of the mucous membranes of the respiratory organs, aluminium aceto-tartrate having been found exceptionally serviceable. In the treatment of ozaena the preparations surpassed all known remedies.

#### TEST FOR DIGITALIN.

LAFON (*Comptes Rendus*) gives the following:—Damp the suspected substance with a mixture of equal parts of pure sulphuric acid and alcohol, and warm until it assumes a yellowish tint. The addition of a drop of solution of chloride of iron develops a blueish-green colour, which remains for some hours. This test is distinctive, with even one-tenth of a milligramme of digitalin.

#### THE DETERIORATION OF SWEET SPIRITS OF NITRE.

MR. G. E. PERRY, vice-president of the Midland Counties Chemists' Association, sends us a further note on Sweet Spirits of Nitre, in which he records the following experiments. He procured on May 6 a supply of sp. æther. nit. P.B., which had been recently prepared, and which, on estimating by Allen's method, showed a proportion of 4.10 per cent. of  $\text{EtNO}_2$ . A 32-oz. bottle of it was placed on the shelf of the pharmacy, and the remainder, a stoppered Winchester quart about three-quarters full, was put away in the cellar. From the former small portions (3ij. to 5j.) were taken from time to time, as would be done in the ordinary way, till the quantity was reduced to about 5ij.; and on July 23 the spirits were again examined, when a proportion of 1.77 per cent. of  $\text{EtNO}_2$  was found in the shop bottle, and of 3.58 per cent. in the cellar bottle. These experiments, Mr. Perry remarks, represent more or less what can be done in the way of storing this troublesome compound, and point to the necessity of discarding from our pharmacies the large bottles, in which sp. æther. nit. is generally kept. In the usual routine of a pharmacy the bottle would not, of course, have been allowed to "run so low." But this was done purposely to ascertain the result under still more unfavourable conditions than would generally obtain. If the bottle had been filled up when about half empty, as is customary, the percentage of  $\text{EtNO}_2$  would, of course, have been higher, somewhere near the mean of the two, namely, 2.675 per cent.

"Whether ethyl nitrite is or is not the active principle of sweet spirit of nitre," Mr. Perry adds, "is a point which, I am well aware, has by no means been settled therapeutically."

\* *Chemiker Zeitung*, July 12, 1885.

† *Chemiker Zeit.*, July 26, 1885.

\* *Pharmaceutische Zeitung*, July 1, 1880.





## PROSECUTIONS UNDER THE ARSENIC ACT.

AT the Town Hall, Guildford, on August 10, before Mr. W. Mason, mayor, and Messrs. W. Twiggs, E. T. Upperton, and other magistrates, Mr. Frederick Wheeler, chemist and druggist, of 129 High Street, Guildford, appeared to answer two summonses under the Arsenic Act.

The prosecution was conducted on behalf of the Government by Mr. Perkin, solicitor, of Guildford, and Mr. Henry Glaisyer, of Messrs. Glaisyer & Porter, solicitors, Birmingham, appeared for the defendant, instructed by the Chemists and Druggists' Trade Association of Great Britain.

Mr. Perkins: All both of these summonses arise upon one transaction, it will perhaps be better to take them together.

Mr. Glaisyer: I would rather that they were taken separately. I will not ask you to repeat the evidence given under the one summons in the second unless absolutely necessary.

The Bench decided that the summonses had better be taken separately.

Magistrates' Clerk: Then, Frederick Wheeler, you are charged that on May 23 last, at the parish of Holy Trinity, in the said borough, you did sell  $\frac{1}{2}$  oz. of arsenic to one Eliza Fenn, the said Eliza Fenn being then unknown to you, the said Frederick Wheeler, and such sale not having been made in the presence of a witness who was known to you, the said Frederick Wheeler, and to whom the said Eliza Fenn was also known, contrary to sect. 2 of the statute 14, and 15 Vict. Chap. 13, "an Act to regulate the sale of Arsenic."

Mr. Perkins: This summons is taken out under the 2nd section of the 14 and 15 Vict., chap. 13, commonly known as the Arsenic Act, which is as follows:—"No person shall sell arsenic to any person who is unknown to the person selling such arsenic, unless the sale be made in the presence of a witness who is known to the person selling the arsenic, and to whom the purchaser is known, and who signs his name, together with his place of abode, to such entries, before the delivery of the arsenic to the purchaser, and no person shall sell arsenic to any person other than a person of full age."

The facts of the case are briefly these:—On May 23 last, a Saturday afternoon, a woman went to the shop of Mr. Wheeler, who, as you are aware, carries on the business of a chemist and druggist at 129 High Street, Guildford, and asked for some arsenic. The defendant asked for what purpose it was required. She said for poisoning rats. He advised her to take something else, but she refused to do so, saying she preferred arsenic. After some little further conversation, he supplied her with the arsenic, having coloured it and labelled it "poison," &c., as required by the Act, and also registering its sale in a certain form in his poison register. The woman was known to defendant by sight but not by name, address, or occupation, which is proved by the fact that the woman gave a false name and a false address, and these false statements were accepted by the defendant as true statements, and entered as such in his poison-register instead of her correct name and address, which would have appeared there had they been known to the defendant. It seems that this woman afterwards took the arsenic away, went home, and took it on the following morning, and died on the following evening. An inquiry as to the cause of her death was held by order of the coroner, and the jury found by their verdict that she committed suicide whilst in a state of unsound mind. The defendant gave evidence at the coroner's inquest to the facts as I have just stated them.

Mr. George Frederick Romieu, coroner for West Surrey,

examined by Mr. Perkins, said the inquest touching the death of Eliza Fenn was held on May 28 last and adjourned until June 18, and that the verdict of the jury was that the deceased committed suicide by taking white arsenic in a fit of temporary insanity.

Mr. Perkins: I believe evidence was given by the defendant at the inquest?—A. Yes, Mr. Wheeler gave evidence.

Q. What was the nature of it?—A. Frederick Wheeler on oath says:—I am a registered chemist and druggist, carrying on business at 129 High Street, Guildford. On Saturday, May 23, at between three and four o'clock in the afternoon, I was called into the shop by my assistant, when I saw a woman standing in the shop. In my opinion the photograph now produced was taken from the same person. She asked me for a small quantity of arsenic for the purpose of killing rats. I asked her to take something else, but she refused, saying she preferred arsenic. Instructed my assistant to weigh  $\frac{1}{2}$  oz. and colour it with charcoal; he did so. Deceased had been in the habit of dealing with me. She was by herself on the 23rd. I did not notice anything peculiar about her on that occasion.

Q. Did you then ask defendant to produce his poison register?—A. Yes.

Q. And I believe you asked him several questions?—A. I did.

Q. But you did not take down his answers in writing?

Magistrates' Clerk: You say he then produced his poison book?

Witness: Yes.

Mr. Perkins: Was defendant able to identify the woman without the aid of the photograph?—A. No, he was not.

Magistrates' Clerk: Did he see the body then?

Witness: No, he did not. I did not know that I should require his evidence at the time I held the inquest on May 28. I adjourned it until June 18 in order that Dr. Stevenson might make a post-mortem examination. We did not think at the time that any proceedings would be taken against Mr. Wheeler.

Mr. Perkins: Was any statement made by defendant at the inquest to the effect that he did not know Eliza Fenn by that name when she purchased the poison?—A. He said he knew her by sight only, and I should say the fact of his making the entry in his poison book in a wrong name was conclusive evidence that he did not know her.

Mr. Glaisyer: I must ask the witness not to argue, please.

Witness: I was only making a remark in reference to a question asked me by Mr. Perkins.

Magistrates' Clerk: Did defendant say at the inquest that he only knew the woman by sight?

Witness: Yes, he did.

Defendant's poison register was then produced, and Mr. Romieu identified it as the book that was produced at the inquest. The entry referring to this was—"May 23, 1885. Eliza Mardon, Stoke.  $\frac{1}{2}$ ss. arsenic. Rats. (Signed) Eliza Marten."

## Cross-examined by Mr. GLAISYER.

Q. I notice in the return of the inquest that the jury find that the deceased committed suicide by taking white arsenic; there is no suggestion that the arsenic sold was not properly coloured?—A. None whatever.

Q. I am anxious that this point should be made quite clear. You say that defendant answered several questions of yours, the answers to which you did not take down in writing?—A. That is so.

Q. Did he tell you how long he had known the woman?—A. Yes; I think he said that he had known her some time.

Q. Did he say that he had known her five or six, seven or eight years?—A. He might have said so.

Q. But did he?—A. I do not remember.

Q. You are not sure?—A. No.

Q. As a matter of fact, I may tell the Bench that he had known the woman seven or eight years. The evidence you have just given would lead one to suppose that the defendant did not know the name and address of the deceased?—A. That was the inference I derived from the fact that he inserted the wrong name and address in his poison register.

Q. But was there no evidence to that effect at the inquest?—A. I think not.



Q. Defendant did not say, then, that he did not know the name or address of the deceased?—A. No.

George Fenn, husband of the deceased, produced the photograph of his wife which defendant had recognised at the inquest.

*Cross-examined by Mr. GLAISYER.*

Q. Do you know your late wife's handwriting?—A. No.

Q. You do not know the late Eliza Fenn's writing?—A. No; I am no scholar.

Q. Then you would not know your wife's writing if you saw it?—A. No; I should not.

Q. Don't you know that your wife was in the habit of going to defendant's shop for drugs and other goods?—A. No; for I never saw the man in my life until he came to the inquest.

Q. Did you never tell Superintendent Barker that if your wife had wanted poison she would have bought it at Wheeler's, as she always dealt there?—A. No.

Q. Do you mean to tell me that you did not make that statement to Superintendent Barker?—A. No; certainly not.

Q. Did you not have some conversation with Superintendent Barker about the matter?—A. Yes; but I never said that.

Mr. Glaisyer: In a letter I have here from Superintendent Barker he states that Fenn told him that if his wife had wanted poison she would have bought it at Wheeler's, as she always dealt there.

Mr. Perkins: That letter is not evidence.

Mr. Glaisyer: I am aware of that fact; but still I thought it advisable to read it to the Bench.

Q. Did you never tell Superintendent Barker what is stated in that letter?—A. No.

Q. You don't remember having any conversation with him of that character?—A.—No.

*Re-examined by Mr. PERKINS.*

Q. Do you know any chemist in Guildford?—A. Yes.

Q. Who?—A. Mr. Waller Martin.

Q. Did your wife go to his shop for goods?—A. Yes; she has been.

Mr. Perkins: That is my case; but I wish to make a few further remarks.

Mr. Glaisyer: Is my friend entitled to make any further remarks?

Magistrates' Clerk: Certainly not.

Mr. Glaisyer: Then, for the defence, I wish in the first instance to call your attention to the very careful way in which the section of the Act under which these proceedings are taken has been drafted. We are brought here to-day on a summons under the Arsenic Act. The preamble of that Act states, "That, whereas the unrestricted sale of arsenic facilitates the commission of crime, be it enacted," and so forth. Then, in the first section, "Every person who shall sell any arsenic shall forthwith, and before the delivery of such arsenic to the purchaser, enter or cause to be entered in a fair and regular manner in a book or books to be kept by such person for that purpose set forth in the schedule to this Act, or to the like effect, a statement of such sale, with the quantity of arsenic so sold, and for the purpose for which such arsenic is required or stated to be required, and the day of the month and year of the sale, and the name, place of abode, and condition or occupation of the purchaser, into all which circumstances the person selling such arsenic is hereby required and authorised to inquire of the purchaser before the delivery to such purchaser of the arsenic sold, and such entries shall in every case be signed by the person making the same, and shall also be signed by the purchaser." Then the second section says, "No person shall sell arsenic to any person who is unknown to the person selling such arsenic, unless the sale be made in the presence of a witness who is known to the person selling the arsenic, and to whom the purchaser is known, and who signs his name, together with his place of abode, to such entries before the delivery of the arsenic to the purchaser, and no person shall sell arsenic to any person other than a person of full age." Well, now, on the general construction of this section, I ask you to hold that the defendant is not the seller of the poison at all. The seller of the poison is clearly shown by the general construction of the section I have read to be in this case the assistant. He it was who prepared the arsenic for sale by colouring it. He it was who made the entry of the sale in the poison book, and his hand

actually supplied the poison to the purchaser. You will see by the Act that all these formalities are to be carried out by the seller. But, supposing you do not agree with this construction of the Act, and you find that the defendant is the seller of the poison, and that, therefore, the action taken by the prosecution in bringing this question before you is rightly directed against him, and not against the assistant, he is charged with selling  $\frac{1}{2}$  oz. of arsenic to one Eliza Fenn, the said Eliza Fenn being then unknown to him, the said Frederick Wheeler, and such sale not having been made in the presence of a witness who was known to him, the said Frederick Wheeler, and to whom the said Eliza Fenn was also known contrary to section 2 of the statute 14 and 15 Viet., chap. 13, entitled "An Act to regulate the sale of Arsenic." Now, in my view, the part performed by the defendant in the transaction was that of a person known both to the seller and purchaser, and as introducing the latter to the former; further, it is true that if I take that view I must also contend that the defendant's name should appear in the entry of the sale as a witness to the purchase, as his name does not there appear. If you take this view I admit at once that he was in the wrong to that extent. But assuming that you find that the defendant was the actual seller, within the meaning of the section, is he rightly brought here on this summons? Can it be said that he sold the poison to the deceased without knowing her? The words of the section are: "No person shall sell arsenic to any person who is unknown to the person selling such arsenic unless the sale be made in the presence of a witness who is known to the person selling the arsenic, and to whom the purchaser is known, and who signs his name, together with his place of abode, to such entries before the delivery of the arsenic to the purchaser, and no person shall sell arsenic to any person other than a person of full age"; and therefore it is necessary for you to consider the meaning of the word "known" as used in this section of the Act of Parliament. I think it will be clear to your mind that the object of this particular section of the Act is to afford means of identification of a criminal in cases where arsenic may have been used for illegal purposes. Surely the fact of this woman being well known to the defendant was a sufficient justification for him to supply her with the arsenic. It is not contended by the other side that she was not well known to him by sight, and the fact alone of her being so known was sufficient for him to identify her if occasion arose for her so doing, and in point of fact, as the Bench will observe, he was able to identify her by her photograph as soon as it was shown to him, proving, as I am sure you will see, that he did know her. I am fortified in this contention by the fact that the Act is directed against the indiscriminate sale of poison to strangers, which is absolutely prohibited by its provisions. In the case before you the person to whom the poison was sold was not a stranger in any sense of the word. The defendant says he knew her well, and even if, as the other side contend, she was only known to him by sight, it could not be held that she was a stranger. Unfortunately, my client's mouth is closed; if he could have given evidence he would have told you that he knew the woman well as a customer of his, and that he had so known her for some six or seven years. The Coroner is unable to say if at the inquest the defendant mentioned any time during which he had known the deceased. I am further fortified in my contention that the principal object of this Act is to prevent the sale of arsenic to strangers, and to make provision by which purchasers of arsenic can be traced if necessary. By the words used in the first section, which directs the manner in which the seller is to obtain the name and address of the purchaser, he is not only authorised, but he is required, to get that information from purchasers themselves. I don't think I need make any further remark on this summons except once more to ask the Bench to bear in mind that the defendant is unable to explain to them the extent he did know the deceased, and that the Coroner admits that. At the inquest no direct evidence was taken as to how far his knowledge of the woman extended. The Coroner assumes that my client did not know the deceased because a wrong name and address appears in his poisons register, but surely that will not be accepted as sufficient evidence by the Bench.

Magistrates' Clerk: The Magistrates will hear the other summons before deciding on this one.



On the second summons—"Frederick Wheeler, you are charged that on the twenty-third day of May last, at the parish of Holy Trinity, in the said borough, you did sell half-ounce of arsenic to one Eliza Fenn, and did deliver the same to her, and that you, the said Frederick Wheeler, on the sale of such Arsenic, did not make in a book kept for the purpose, the entries relating to such sale required to be entered on such sale by the statute 14 and 15 Vict., chap. 13, entitled 'An Act to regulate the sale of Arsenic,' that is to say, did deliver the said arsenic to the said Eliza Fenn without having entered in the said book the name and surname of the purchaser, and the condition and occupation of the said Eliza Fenn, contrary to section 1 of the said statute."

Mr. Perkins: The section under which this summons has been taken out has already been read to you, but I think it will be convenient for me to make another extract from it. It says that, before delivery of such arsenic to the purchaser, he shall enter or cause to be entered in a fair and regular manner in a book or books to be kept by such person for that purpose, set forth in the schedule to this Act, or to the like effect, a statement of such sale, with the quantity of arsenic so sold, and the purpose for which such arsenic is required or stated to be required, and the day of the month and year of the sale, and the name, place of abode, and condition or occupation of the purchaser; and further, if the purchaser of the poison is not well known to the seller—

Mr. Glaisyer: The word "well" does not appear in the section, I think.

Mr. Perkins: Known, then.

Mr. Glaisyer: Quite so.

Mr. Perkins: Then, further, if the purchaser is not known to the seller, by section 2, "no person shall sell arsenic to any person who is unknown to the person selling such arsenic, unless the sale be made in the presence of a witness who is known to the person selling the arsenic, and to whom the purchaser is known, and who signs his name, together with his place of abode, to such entries, before the delivery of the arsenic to the purchaser; and no person shall sell arsenic to any person other than a person of full age." Now, I will ask the Bench to examine defendant's poison register again, and see if, in their opinion, the entries there made in reference to the sale of this particular arsenic in question are in accordance with the requirements of the statute. That is my case.

Mr. Glaisyer: If that be so, there is nothing to prove the fact that the entry in the book is the entry of the sale before the Bench.

Mr. Perkins: There is the date of the sale, which is not denied by the defendant.

Mr. Glaisyer: There is no evidence before the Bench that the entry to which you have directed their attention is the entry of the actual sale of the arsenic in question.

Mr. Perkins: But your client identified the deceased woman from her photograph as the woman who made the purchase, and in reference to the same purchase this entry was made in his poison register. This case depends, to a certain extent, on the evidence given in the first summons; if the defendant had known the woman in the way the other side contend he surely would not have accepted from her a wrong name and address. The Act says that on the sale of any arsenic, and before the delivery of the same to the purchaser, the seller shall enter, or cause to be entered, in a book the name and surname of the purchaser and the place of abode and condition and occupation of the purchaser. And I submit that this must mean a right name and a right address, and not a false name and a false address, which was given in this case and accepted by the seller. No doubt the object of this section is to trace any one who might have purchased arsenic and used it for illegal purposes. And if the seller of arsenic be satisfied to receive false names and addresses when given by the purchaser, how could he or the purchaser be afterwards traced by the police if necessary? Taking this view of the case before you, could the defendant have communicated with the person who purchased the arsenic in question from an inspection of his poison book? Certainly not. The date, name, and address appearing there is not the name and address of the actual purchaser, and he could not therefore have communicated with the actual purchaser from an inspection of his register if in the interests of justice it had been necessary for him to do so. As a matter of fact, it was a mere accident that he was able to identify his purchaser at all, and then only from an inspection of her

photograph. Without the aid of the photograph the police might never have known from whom the arsenic was obtained. Therefore I do not think—and I do not think that you will hold—that arsenic may legally be sold in this way, as if so the intention of the Act would be entirely defeated. Another point is—the defendant has not entered in his register the condition or occupation of the purchaser as required by the statute, and her name even is not entered correctly, it being entered "Eliza Mardón" and signed "Eliza Marten." Then, as to the address, the actual purchaser lived at Worpleston; the name of the place appears in the poison-register as Stoke; therefore—

Mr. Glaisyer: The question of the address does not arise on the summons, and therefore cannot be gone into here.

Mr. Perkins: Pardon me, the defendant is charged with not making in a book kept for the purpose the entries relating to such sale required to be entered on such sale by the statute.

Mr. Glaisyer: We are specifically charged with having delivered the said arsenic to the said Eliza Fenn without having entered in the said book the name and surname of the purchaser and the condition and occupation of the said Eliza Fenn; nothing is said about the woman's address being omitted.

Mr. Perkins: It seems that the form of entry in the defendant's poison book is that required by another Act of Parliament. The statute under which the summons before you is taken out relates only to the sale of arsenic, but 31 and 32 Vict. chap. 121, commonly known as the Pharmacy Act, and dealing with the sale of all sorts of poisons, includes arsenic and its preparations in its poisons schedule. The entries required to be made by sellers of poison under that Act are not so full as those required by the Arsenic Act. It must, however, be borne in mind that the 17th section of the Pharmacy Act expressly states—"nothing in this Act contained shall repeal or affect any of the provisions of an Act of the session holden in the fourteenth and fifteenth years in the reign of her present Majesty, intitled 'An Act to regulate the sale of Arsenic.'" Therefore I submit that it cannot be satisfactorily argued that if the provisions of the Pharmacy Act are adhered to in reference to the sale of arsenic that is sufficient.

Mr. Glaisyer: In this case I don't think that you require any further facts than those already placed before you on the first summons. We are charged on this second summons with having sold arsenic to one Eliza Fenn, without having entered in our poison register the name and surname of the purchaser, and her condition and occupation. Here, again, I must renew my contention that the defendant is not the seller within the meaning of the section and Act in question; but that the assistant is the seller. If on the other hand you take the view that the defendant was the seller within the meaning of the Act, then he is charged with delivering arsenic to the purchaser without having entered in his register the name and surname of the purchaser, and her condition and occupation. It is quite certain that the christian name of the deceased was Eliza; that is admitted by the Coroner. Therefore, I apprehend that portion of the summons must fall through. Then with regard to the surname, as I pointed out before, what is required of the seller is that he shall enter in a book a description of the name, address, condition, and occupation of the purchaser as he receives these particulars from the purchaser himself, and that he is not only authorised, but absolutely required, to obtain these particulars from the purchaser by putting questions to the purchaser for that purpose, and I again submit that the only object in putting these questions to the purchaser is to take down his answers. In this case, the name given was, I suppose, Marten, and if the woman's pronunciation was faulty, as I presume it was, the assistant, who, I contend, was the actual seller, and under any circumstances supplied, understood it to be Marden, and so entered it in the poisons book. Then you are told, and the summons goes to this, that the condition and occupation of the purchaser is not entered in the book. That is so, I admit it at once, and I will give reasons for its non-appearance there. The Act under which this prosecution has been commenced was passed in 1851, and it is confined in its operations to arsenic only. In the year 1868, a further and more comprehensive statute was passed dealing with the sale of poison generally, and amongst the poisons enumerated in the first part of the



schedules to that Act is arsenic and its preparations. The 17th section of that more recent Act of Parliament requires that on every sale of any such article the seller shall, before delivery, make or cause to be made an entry in a book to be kept for that purpose, stating in the form set forth in schedule (F) to this Act the date of the sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated by the purchaser to be required. Now the entries made in the defendant's poison register on the sale of this particular arsenic were in strict conformity with the requirements of the 17th section of the Pharmacy Act. The Act to which I have just directed attention included in its schedule another column for the condition and occupation of the purchaser; which facts, please clearly understand, are not required by the more recent Act, hence the omission of these particulars from the defendant's register.

Mr. Perkins: May I ask the Bench to carefully compare the entry in the defendant's poison register with the schedule attached to the Arsenic Act, when they will at once see that the entry in the register is incomplete. As far as I can see, the columns in both the Pharmacy Act and the Arsenic Act are the same.

Mr. Glaisyer: Pardon me, the columns are not the same. In the schedule to the Pharmacy Act there is no column for condition or occupation, and the 17th section of that Act says—

Mr. Perkins: Will you kindly read the whole section if you are going to quote from it?

Mr. Glaisyer: Certainly. [Read the 17th section of the Pharmacy Act.] That is the whole section, read at the request of my friend opposite. The summons is not taken out under this Act, but under an Act to regulate the sale of arsenic only, which is not repealed or affected by this Act, but remains in force in all its integrity. In dealing with this case, I admit that strictly there has been an infraction of the regulations made for the sale of arsenic; but when the subject of fixing the penalty is considered, I think if the Bench should hold that the defendant is the seller, and therefore rightly called upon to answer this charge, you should satisfy yourselves as to the enormity of the offence, and I am sure that you will see that the offence is a very trivial one, and that a very small penalty will meet the justice of the case.

After a consultation of the magistrates, the Chairman said: The Bench can come to no other conclusion than that the defendant is the seller of the arsenic within the meaning of the Act of Parliament, and therefore he must pay a fine of 2*l.* and costs in the first summons, and 1*l.* and costs in the second summons, as we think the entry in his poison book was not in accordance with the section of the Act under which the summonses were taken out.

Mr. Glaisyer: Will the Bench grant me a case upon the first summons heard?

Chairman: Yes.

#### METHYLATED SPIRITS.

AN important excise case, which has been much talked of in Edinburgh, came before Lord Fraser, in the Court of Session on the 11th inst. Some weeks since, 534 gallons of spirits had been seized by the Excise on the premises of D. J. Thomson & Co. rectifiers, St. Anthony Street, Leith. The Lord Advocate, at whose instance the prosecution is conducted, alleged that respondents had mixed methylated spirits with goods seized. Respondents denied this, and alleged that the goods were purchased by them in the ordinary course of business from several dealers, and among others from Messrs. Warrick & Sons, Elbe Street, Leith, reputed to be a first-class house, and with whom respondents had dealt for many years. Ordinary tests, it was alleged, failed to disclose the presence of methyl. They offered to undertake that no portion of the goods seized should be sold for human consumption, but this offer was declined.

Paul Helm, supervisor of excise, Leith, said that the rectifying premises in St. Anthony Street, Leith, occupied by James Ford and Richard Dickson, carrying on business under the name and title of D. J. Thomson & Co., were in his district. On June 11 last he and an officer named Kitsell examined the premises. They found four stills at work. There were two spirit-receivers. The spirits running

into the receivers were prepared for use as a beverage. When he tasted and smelt the spirits he thought they were mixed with methylated spirits. He took samples from each receiver, then he caused the contents of the receivers to be run into casks, and put them under seizure. The samples were sent to Somerset House, London. At the time of the seizure he saw both respondents and their manager, and gave them samples of the spirits. On a later date quart samples were taken from the casks, and were also sent to Somerset House. Before the seizure he had discovered that Messrs. Raimés & Co., Smith's Place, Leith Walk, had sold large quantities of methylated spirits to Warrick & Sons. He ascertained from Messrs. Raimés' manager that 2,690 gallons of methylated spirits were supplied by them to Warrick & Sons, between February 20 and May 25. There were no entries in Messrs. Warrick's books with reference to methylated spirits. From Thomson & Co.'s stockbook it appeared that between February 21 and June 5 Warrick & Sons sent to Thompson & Co. 4,601 8-10 proof gallons of spirits, and that between April 13 and May 18 they received 1,891 gallons of rectified spirits from Warrick & Sons. The respondents were not licensed retailers of methylated spirits, and Warrick & Sons were not authorised methyl-laters. Cross-examined: He knew that dealers were in the habit of extracting spirits from the wood of whisky-casks, and the grog they obtained was sent to rectifiers to be purified. Rectification, whether of strong spirits or of grog, was simply redistillation. The stills are locked during the process, so that no addition can be added to the material in the still. It is the duty of officers of excise to lock up the stills before distillation begins, and to take away the keys. They have also power to see the stills discharged. It was the duty of the excise officers who were present at the filling of the stills to report if methylated spirits were being put into them, and one of the officers did say that he suspected the presence of methyl. He could not say what the impurities were which were sought to be removed by redistillation. Dealers could not get a permit for grog which they received into their premises. He got a clue, which he would not disclose, that Messrs. Raimés & Co. were supplying dealers with methylated spirits. A licensed retailer of methylated spirits could sell one gallon without a permit.

Lord Fraser: And if the purchaser came back in half-an-hour could he get another?—Witness: That is the question in dispute.

Thomas Kitsell, officer of excise, confirmed Mr. Helm's evidence. In cross-examination he said:—Experience had a good deal to do with the detection of methylated spirits, and he thought he had skill in that way. There were various impurities in spirits which were brought in for rectification. Africar rum, from Natal, had a very nasty smell and taste, a good deal like methyl. Sometimes also spirits got casky from lying in the wood, and required to be rectified; stuff so sent would very likely be sent in a reduced form, such as grog. Before the seizure they were told that Warrick & Sons had been mixing methyl, and the respondents had been dealing with Warrick & Sons. On the same day as they seized respondents' spirits they also seized spirits in another place which had been sent from Warrick's. In point of fact, it was not their sense of smell or taste that led the detection, but their knowledge that these firms had been dealing with Warrick. He was present when some of the stills in respondents' premises were charged, and he detected nothing wrong, but it was possible that, from its reduced nature, it might not be easy to detect. When the material was put in he both tasted and smelt it, but he did not then detect methyl. At that time he was aware of what had been done at Warrick's. Respondents were the largest rectifiers in Leith, and they had always held a very honourable position. Spirit which had been rectified might be used in the making of varnish, or in any other way commercially, so that the mere fact of its being in the receiver did not imply that it was to be used as a beverage.

William Arthur Davis, manager to Messrs. Raimés & Co., said that the methylated spirits supplied to Warrick & Sons were furnished in one-gallon jars. Warrick & Sons' man would bring jars into their warehouse; he would then produce an order for one gallon, and on being supplied with it he went outside the premises, where he had a larger vessel, into which he poured the liquor, and then returned and presented another order. (Laughter.) On one day they got, in



that way, as many as eighty gallons.—Cross-examined: The provision of the Act was that not more than one gallon was to be supplied to any person "at one time," and his view was that the Act was complied with if only a single gallon were supplied, in a separate vessel and upon a separate order. When Warrick & Sons first sent for methylated spirits, witness asked their messenger what it was to be used for, and was told that it was for a greenhouse. Not satisfied with the answer, he caused the barrow which took away the spirits to be watched, and it was found that the barrow was taken to Warrick's warehouse. Witness then went to Warrick and asked him if he was justified in taking the goods into his warehouse. Warrick replied that he was. Witness thought the matter must be right. He did not know what was the Messrs. Warrick's business, and he took no means of ascertaining. One of Messrs. Warrick's messengers said that the methylated spirits were put into empty casks and among grog.

Walter Warrick, junior partner in the firm of Warrick & Sons, said he took an active share in the conduct of the business. During the first half of this year they got a considerable quantity of methylated spirits from Raimes & Co.

The Solicitor-General: What did you do with it?

Witness: I decline to answer that.

The Solicitor-General: Then I ask your lordship to order the witness to answer it.

Lord Fraser: I cannot do that.

Witness was taken out of court at counsel's request, and Mr. Robertson argued that the question was eligible in respect that it did not criminate the witness, although it might subject him to a penalty. Lord Fraser did not think that the Crown had a right, when prosecuting for penalties, to put the accused person into the witness-box and to ask him whether he did or did not do the thing which he was accused of. He therefore adhered to his opinion that the question was incompetent.

Witness was then recalled. He said that during the present year he supplied the respondents with spirits.

The Solicitor-General: Did any of those spirits contain methylated spirits?

Witness: I decline to answer that question. On May 27, witness continued, a seizure of spirits was made in their premises. He could not say that the ground of seizure was that the spirits were mixed with methylated spirits. They did not claim the spirits, and the Lord Ordinary on Exchequer causes gave decree of seizure. Lord Fraser said that he gave the decree, and he was quite aware of what the ground of seizure was.

The Dean of Faculty said he would not cross-examine the witness.

Dr. James Bell, principal of the laboratory at Somerset House, London, said they first examined the samples which were sent to him by taste and smell in both hot and cold water. The distinct odour of methylated spirits was so strong in the samples that they at once pronounced that methyl was present. They then set the samples apart for 48 hours, and it was found that the smell of wood-naphtha was very much developed. They then applied chemical tests, which confirmed their previously formed opinion, that methylated spirits were present. He was quite prepared to affirm that there was methylated spirit in the samples. He considered them unfit for use as a beverage. Cross-examined: There was not less than 3 per cent. of methyl in the samples.

Richard Bannister, James Cameron, and Charles Proctor, Somerset House, and Mr. Falconer King, city analyst, Edinburgh, were also examined, and gave evidence corroborative of Dr. Bell.

For the defence the Dean of Faculty said he proposed to examine Mr. Ford and Mr. Dickson, the respondents. Objection was taken by the Solicitor-General on the ground that in a prosecution of this nature, where the charge was partially criminal, it was incompetent to examine the person accused. His lordship ruled the evidence to be incompetent.

Professor Dittmar, Anderson's College, Glasgow, said he was unable to discover the presence of methylated alcohol by smelling, but he added that pure methyl had almost no smell. Ordinary wood spirit had a very characteristic odour, but he did not discover the trace of it by smelling in the samples which were sent to him. In order to test them chemically, he not only used the method approved by the French Academy of Science, but he took pure spirit and

added methyl to it, and then analysed the liquor. Even where methyl was present to the degree of only one-half per cent., the violet colour was produced very strongly. Alcohols which were altogether free from methyl gave a slight violet colour, attributable, he believed, to the presence of fusel oil. The samples sent to him from Leith gave a colour like that of pure alcohol with one-half per cent. methyl in it. He could not have affirmed that methyl was present. He resorted to fractional distillation, a method in which he always found that whatever it was that produced the colouring, it came off with the first fraction, and the subsequent fractions became gradually fainter, until no colour was left. In fractionally distilling the samples he found that there was no grading, the colours were the same throughout, and he thus concluded that there was almost no methyl present. After crucial test he was of opinion that there was not so much methyl present as was cognisant to the most delicate tests. On being shown samples of wools coloured in the course of experiments in Somerset House, he said he could not understand them; there was something radically wrong with them. (Laughter.) The court rose before the witness was cross-examined.

The case was resumed on August 12, when Professor Dittmar was cross-examined by the Solicitor-General. He said that since he was in the witness-box before he had, merely by the sense of smell, succeeded in selecting from three samples of spirits one containing only  $1\frac{1}{2}$  per cent. of methyl.—Dr. Stevenson Macadam, Edinburgh, said he analysed the samples which were sent to him by two distinct methods. He also tried them by tasting and smelling, and did not detect methyl. He could readily detect 1 per cent. of methyl alcohol in spirits by taste and smell, but he was sensitive in these senses, and everyone might not detect such a small proportion. The chemical processes he used were that of Riche and Bardsy (the French method), and that of Cazeneuve, known as the permanganate test. The result of those tests was that he could not find any trace of methyl in either of the samples. He was prepared to affirm that methyl was not present. He got no violet colour from the suspected samples.

After hearing counsel on both sides his lordship gave his decision. He said that he did so on the footing that the defenders bought the spirits not knowing that they contained methyl. The only question for him to determine was whether or not the spirits contained methyl. One of the most difficult parts of the judicial office was to estimate the weight due to conflicting testimony, and especially scientific testimony, given by learned and honourable men, each intending to speak his real opinion. He had had the evidence of four men whose business it was to inquire into such matters. They had been doing so for years, and they had no interest in the result of the case. No promotion was to follow upon their saying that there was methyl in the spirit. They made inquiry by every test known to science, and with the same result in each case. He held it was proved that the spirits seized by the Crown on June 11 contained methyl, and he accordingly pronounced judgment for the Crown on that count.

#### A TRADE-MARK DISPUTE.

A MOTION was recently made on behalf of Lipscombe & Co., the makers of the sanitary filter, to have the register of trade-marks rectified by expunging from the trade-mark of the Atkins Filter and Engineering Company the words "sanitary filter, easily cleaned," which were added to a device of two arrows crossed, or, in the alternative, that the Controller of Trade Marks might be ordered to enter on the register a note that the Atkins Company were not entitled to the exclusive use of the words on their trade-mark. The ground of the motion was that the words in question were merely descriptive, and could not, therefore, be the subject of a trade-mark. On the other hand, the Atkins Company contended that as they had registered their trade-mark as long ago as 1877 they had acquired a good title to it. It appeared an action was pending by the Atkins Company against Messrs. Lipscombe to restrain them from using the word "sanitary." The Vice-Chancellor said he much regretted this unfortunate litigation. The subject of it was the most unimportant that could possibly be conceived. Still it was permitted by the Act of Parliament, and therefore



the Court must decide between the parties. The Trade Marks Act said that when a man registered a trade-mark, such as cross arrows, as in the present case, it might be accompanied by words indicating what it was to apply to. That was all the Atkins Company had done. In his opinion the application was a mistake, and must be refused, with costs.

#### THE SPECTACLE TRADE.

ON August 5, at the Clerkenwell County Court, before Judge Eddis, a case was heard in which Alexander Druiff (trading as Russell & Co.), Milner Square, Barnsbury, sued Mrs. Oldershaw, York Town, Surrey, for a sum of 7*l.* 3*s.* 6*d.*, value of spectacles supplied.

The plaintiff was represented by counsel, and Mr. Popham, solicitor, appeared for defendant.

Mr. Samuells proved the ordering and delivery of the goods, and produced a signed memorandum given at the time of ordering.

Mr. Popham submitted that the plaintiff could not recover—notwithstanding the signed order—because the order had been obtained by means of misrepresentation and fraud.

Counsel said no representation had been made to defendant which was not absolutely true. Plaintiff had agreed to change any unsaleable goods.

Mr. Popham: They were all unsaleable.

Cross-examined by Mr. Popham: What is your real name?—My name is Samuells.

How long has that been?—Since I was born.

Have you not any other name?—No.

Counsel took objection to the question.

The Judge thought the question might be pressed.

Mr. Popham: Have you ever passed by any other name?—Not upon affidavit; but I have for business purposes.

What other name?—My name is Samuells.

You have said so—from your birth. Any other name?—Sometimes Saville.

What name are you going by now?—Samuells.

So long as we know it is all right. Did you ever pass by the name of Alexander Druiff?—No, that is the person for whom I am here.

Have you ever represented yourself as principal of that firm?—No.

Alexander Druiff is on this paper as plaintiff.—There are several Druiffs.

Have you passed as Russell & Co.?—Alexander Druiff trades as Russell & Co.

Do you also go by the name of Bennett?—Sometimes. Mr. Druiff bought the businesses and incorporated them; but Bennett and Russell & Co. are distinct businesses.

They both deal in spectacles?—Yes.

The Judge: Then the same man is carrying on two businesses of the same kind in different names?

Mr. Popham: Yes, sir; and this person is the traveller who goes to the same place under the two names, and appoints people to be "sole" agents for Russell & Co., and others as "sole" agents for Bennett & Co.

Mr. Popham (to plaintiff): Do you know Mr. Ham, of York Town?—Yes.

The Judge: Did you sell him any spectacles?—Yes.

Did you tell the defendant that you had sold Mr. Ham some spectacles when you solicited an order from her, and appointed her sole agent?—No.

Mr. Popham: He went to the defendant (whose shop is only four doors from that of Mr. Ham), and offered the same class of goods from the same man, under a different name.

Witness: Not the same class of goods.

Mr. Popham: Where is Bennett & Co. established?—1 Arundel Square.

And where is Russell & Co.?—Same place.

Where is Mr. Alexander Druiff?—Out of town at present; but you can see him on Saturday or Sunday.

Have you passed yourself off as Alexander Druiff?—No. You have always signed these papers, "Sole agent for so and so"—Yes.

You travel down Barnet way?—No.

Don't you go to Barnet under precisely similar circumstances as you have now?—No.

Be careful; will you swear you have not gone to Barnet

under similar circumstances as in this case?—Do you mean me personally, or the firm?

Mr. Popham: Don't you know that there is an order out against you at the Barnet County Court to pay costs of an action from which you withdrew at the last moment?—I don't know.

Mr. Popham: You say on this order, "All unsaleable goods taken back." Suppose the whole of the goods were unsaleable, as in this case, would you take them all back?

Witness: No, I would change them for saleable goods.

Mr. Popham asked his Honour if he wished to hear any evidence.

The Judge: I tell you plainly, I think the order was obtained by gross fraud.

Counsel asked what case of fraud he had to answer? It could only amount to damages.

The Judge: I hold, and have always held, that persons should always be held responsible for their acts. And if they won't read what they sign, they must suffer for their folly. One item in the present contract, however, is this, that a woman in a small place like York Town is appointed sole agent for the place for the sale of a certain article; but the same man who appoints her goes to a tradesman only four doors off, and appoints him sole agent for what I say is the same article. It, therefore, appears to me a gross and abominable fraud.

Counsel: I submit that the businesses and the goods were different.

The Judge: Look at the list, and you will find it the same trade. I am more familiar with this sort of thing than you necessarily can be. I have had my suspicions before.

Counsel: Different prices and different goods. It is a heavy charge to make against a tradesman, when no proof of fraud has been given.

Mr. Popham: It has been proved out of his own mouth.

Counsel: But it is only a question of contract, and consequent damages at the most.

The Judge: I quite admit it is a very grave thing to use such expressions as "gross and abominable fraud," but, feeling the gravity, I unhesitatingly repeat them, and for this reason. The firm carries on business as "A. Bennett" and "Russell & Co.," differently described, but both are at 1 Arundel Square, and the order-sheets are the same, and the same traveller is employed, who gets orders under both names. That being the case, he goes to Mrs. Oldershaw, at York Town, who purchases a number of spectacles to the value of 7*l.* odd. She buys them of course for the purpose of selling again, and she signs an order-sheet, by which, I think, she is bound. No person is a friend to another who seeks in any way to relieve him of the responsibility of signing a document without fully knowing its contents, as it is encouraging acts of improvidence. I shall always hold people liable for such acts. But there is a part of the contract which says Mrs. Oldershaw is to be sole agent; but it turns out that Mr. Ham, a jeweller and optician, residing only four doors from her, has been solicited for orders for the same spectacles by the same man, and appointed sole agent for York Town. And nobody would buy Russell's spectacles if they saw the recommendations with which Bennett & Co.'s spectacles were offered to the public. It is downright fraud; and as the fraud induced the contract, it is as old as the hills in equity, and of later years in common law, that a contract obtained under such circumstances is not binding. Verdict for defendant. (Applause in court.)

Mr. Popham: And as this case is of considerable public importance, I ask for costs on the higher scale.

The Judge: Yes, I think I may give costs on the higher scale.

#### LOGWOOD ROOTS.

THE case of the ship *Amsterdam*, which occupied the Probate Divorce, and Admiralty Division for several days, was decided on August 4. There was a complicated claim relating to freights and demurrage, one of the chief complaints being that logwood roots had been loaded in place of logwood itself. A plea was put in that they were the same thing, and this point was the chief one the President had to decide. He was of opinion that the charter party did not mean logwood roots when logwood was mentioned. They were different commercially and physically, and of different value. Roots



had only been imported at all within the last few years, and it was only within the last two years that whole cargoes of roots had been shipped to this country. No proof had been given that a clear and uniform usage of trade had grown up by which logwood roots were treated as logwood for the purposes of shipment. Frequent disputes had arisen, some of which had been compromised.

#### PROSECUTION UNDER THE PHARMACY ACT IN SCOTLAND.

On July 24, in the Sheriff Court at Linlithgow, John Paris Duguid, watchmaker and jeweller, Bo'ness, was charged at the instance of Mr. Richard Bremridge, 17 Bloomsbury Square, London, registrar of the Pharmaceutical Society of Great Britain, with committing an offence against the 15th section of the Pharmacy Act, 1868, by having, on February last, in the premises known as "The Medical Hall," Bo'ness, sold a quantity or kept an open shop for the sale of chloral-hydrate or a preparation thereof, the same being a poison under the Pharmacy Act, the accused not being a duly registered chemist and druggist under the said Act.

Mr. Russell, of Messrs. Glen & Henderson, solicitors, Linlithgow, appeared for the prosecution, and the accused was defended by Mr. Strachan, solicitor, Bo'ness.

After some legal objections had been disposed of Mr. Russell stated that the shop in which the sale was made had been occupied by Samuel Gibson, chemist and druggist, who became a bankrupt. The defendant had bought the business, engaged an assistant to carry it on, and transferred the drugs to his own shop next door. He was not a qualified chemist.

Mr. Miller, jun., solicitor, proved that the drug business in question was part of the bankrupt estate of Samuel Gibson, chemist and druggist, and had been sold to the defendant.

Mr. Peter MacEwan deposed that, acting on instructions, he had visited Bo'ness and made inquiries there. People in the town spoke of the shop as Duguid's, though the Medical Hall Company were said to be the tenants. (A letter from the defendant to the registrar of the Pharmaceutical Society was read, in which he stated that he had a qualified partner.) On February 17 he visited the shop, and handed in a prescription for tannin and a sleeping mixture containing chloral-hydrate. He called a second time and got the articles. A constable was witness of the purchase. He afterwards examined the mixture and found that it contained chloral-hydrate in sufficient quantity to be poisonous if the whole was taken at once. The prescription was written by himself, and did not state for whom it was intended.

Mr. Stevenson, excise officer, Bo'ness, proved that the methylated spirit licence and the patent medicine licence for the Medical Hall, South Street, Bo'ness, were taken out by John P. Duguid.

For the defence, Robert Gordon Stewart was called. He stated that he was a chemist and druggist, registered in 1868. He was in business at Dunfermline till May 28, 1885. The Medical Hall, Bo'ness, was his branch shop, but he was not sole owner. After some hesitation he admitted that Duguid was his partner; that he did not super-vise the business in person; that there was no deed of co-partnership, and that his share was only 1/4 a year. He was not responsible for debts, had no other interest in it, and only lent his name.

The Sheriff strongly reprimanded Stewart for assisting to evade the law. He gave decree against Duguid for the full penalty of 5*l.*, and said that the Pharmaceutical Society was only doing its duty in endeavouring to put a stop to such a practice.

#### LIABILITY FOR CARRIAGE.—GREAT WESTERN RAILWAY *v.* BAGGE.

THE decision in this case asserts the liability of the consignor of goods for costs of carriage, although under the ordinary consignment-note the carrier agrees to look to the consignees for payment. The Court held that the consignment-note, which was actually signed on behalf of the defendants, was really a request to the company to carry the goods for them, on the assurance that the consignees would pay the carriage, but if they did not, then the consignors remained liable. In other words, the statement in the note that the consignees would pay carriage merely meant that they would pay as agents of the consignors.

#### LIEBIG'S EXTRACT OF MEAT.

THE case of the Liebig Company (Limited) *v.* Anderson, which has been several times before different Courts, was finally decided by the House of Lords on July 16, the noble and learned Lords who heard the appeal being the Lord Chancellor, the Earl of Selborne, and Lords Blackburn and Fitzgerald.

Mr. Rigby, Q.C., and Mr. T. N. Lawrence appeared for the appellants; and Mr. N. Higgins, Q.C., and Mr. H. Burton Buckley for the respondent.

The main question was whether the respondent was entitled to sell an extract of meat under the description of "Baron Liebig's Extract of Meat" in pots having affixed thereto a design consisting of a photograph or portrait of the late Baron Justus von Liebig. The method of making the preparation in question was originally discovered by a French chemist named Proust, and the late Baron Justus von Liebig, who died in 1873, developed Proust's discovery, made it practicable for commercial purposes, and fully explained the method of its preparation in a publication called "The Annals of Chemistry and Pharmacy" in 1847, and again in a work called "Family Letters on Chemistry," published in 1851. It appeared from several letters of the late Baron that he desired that the process should not be a secret, but that it should become known to as large a number of persons as possible, and that its manufacture and use should be developed in all parts of the world. Accordingly the article was manufactured and sold by many different persons under his name but without any licence on his part. The appellant company was incorporated in 1865, and had since carried on the business of manufacturing and dealing in the article. They allege that, under a deed poll, under the hand and seal of the late Baron Liebig, dated April, 1866, they were entitled to the sole and exclusive right to use the name "Extractum Carnis Liebig," or the name of Baron Liebig. The respondent was for some time before August, 1881, the secretary of the Australian Meat Company, a company which made and sold Liebig's extract of meat. In August, 1881, the respondent commenced business on his own account, and made and sold the extract under the name of "Baron Liebig's Extract of Meat," and placed on his pots a photograph of the late Baron Justus von Liebig. The appellants having brought an action to restrain the respondent from using that name, as being an infringement of their trade-mark, Mr. Justice Field decided in favour of the respondent, and his decision was affirmed by the Court of Appeal.

Their Lordships now affirmed the judgment of the Court below and dismissed the appeal with costs, on the ground that the manufacture of the article was open to all the world, and that the appellants had no exclusive right to the name of the late Baron Liebig.

Appeal dismissed with costs accordingly.

#### HUDSON'S TRADE-MARKS.

ON July 23, before Vice-Chancellor Bacon, in the Chancery Division of the High Court of Justice, the executors of Robert Spear Hudson, deceased, made applications to register packet and box labels for "Hudson's Carbolic Acid Soap Powder." The labels also bore a small device of a female arm grasping a "dolly," an implement said to be used in laundries.

The applications were opposed by Messrs. Calvert & Co., a firm of chemists in Bradford and Manchester, on the grounds that they had for many years been manufacturers of carbolic acid in various forms, including carbolic acid soaps, and that the words proposed to be registered were not a trade-mark within the Act; that they were mere words of description, and, as such, not entitled to be registered.

Mr. Aston, Q.C., and Mr. Macrory appeared for the applicants.

Mr. Hemming, Q.C., and Mr. Chadwyck Healey, for Messrs. Calvert & Co., contended that a combination of words merely descriptive of the article was not capable of registration, and that the device on the labels was too minute to carry the right to registration of the descriptive words.

The Vice-Chancellor said that, in his opinion, the Act permitted the applicants to use the descriptive words, for how otherwise could they get their commodity known to the public? The device also was sufficiently conspicuous to



satisfy the requirements of the Act. It appeared to him that the trade-mark of the words and device combined was perfectly good, though he thought Mr. Aston was right in offering, under sec. 74, a disclaimer of the exclusive use of the descriptive words. The applications must be allowed, and the opposition dismissed with costs.

On July 29 Mr. Justice Pearson refused to Messrs. Marks & Tellefsen, Bristol, liberty to proceed with the registration of a trade-mark bearing the words, "Royal Dry Soap. Should be used in all cleaning operations," combined with certain devices. The application was opposed by the executors of Mr. R. S. Hudson, on the ground of similarity of the mark to a label registered by the latter.

#### COCKING'S PATENT SPLINTS.

BEFORE the Judicial Committee of the Privy Council on July 15 Mr. John Tonkin Cocking, felt manufacturer, 58 Welbeck Street, petitioned for a prolongation of letters patent in respect of his invention for forming splints by a process by which sheets of felt are prepared with a high degree of porosity, and through which perspiration can freely take place. The felt is treated with a proofing or stiffening solution, and is, when finished, of such a nature that it is plastic when hot and stiff when cold. The invention is acknowledged to be of great value, and the splints are so cheap as to be within the reach of the poor. Notwithstanding the utility of the invention, the petitioner had met with great difficulty in getting its merits acknowledged. For the last nine years he had devoted himself exclusively to introducing and working the invention, and is now entirely dependent for his livelihood upon its success.

Mr. William Allan, F.R.C.S., spoke to the great merit and utility of the invention, and the advantages arising from its use. It was stated that other medical men were in attendance ready to speak to the meritorious nature of the invention, but their lordships intimated that further evidence was not necessary.

The petition was opposed by a gentleman named Clarke, who admitted the merits of the invention, but on the question of novelty he contended that some of the ingredients employed in the preparation of the felt had been in use for some years previously in a process for making felt hats.

The Attorney-General did not dispute that it was an invention of very high merit. The accounts had been satisfactorily explained, and he should leave the matter in their lordships' hands.

The Court granted an extension of the patent for five years.

#### BANKRUPTCIES AND LIQUIDATIONS.

MAX LANDAU, 9 Mincing Lane, E.C., Aniline Dye Manufacturer.

THE petitioning creditor in this case was Mr. Browne (Browne & Wingrove), merchants, of 30 Wood Street, E.C., creditor for 2,750*l.*, and the receiving order was made on June 19. The accounts show gross liabilities 4,124*l.*, of which 2,634*l.* is expected to rank as against assets of 16*l.* The failure is attributed to the depression of trade in dyes in India and China, to inability to get *bona-fide* account sales from his Eastern consignees, and to bad debts 2,503*l.* 8*s.* 10*d.* The petitioning creditor is partly secured, holding 198 casks of magenta dye, estimated to be of the value of 1,485*l.* The case is one for summary administration. There was no quorum at the first meeting of creditors, and the estate is being wound up by the official receiver. On the public examination being called on, the debtor, in reply to Mr. Aldridge, the official solicitor, said he began business in 1880 in partnership with Mr. W. H. Black, witness having no capital. Mr. Black advanced 100*l.*, but he (the debtor) paid him out in the course of the following year. He began business as a dye merchant with a capital of 250*l.* in 1882, and in 1885 became a dye manufacturer with money lent by his wife to the amount of 437*l.* odd. His books contained all his trading, but were not balanced up. The bulk of his stock had been consigned to India and China, and was represented by the bad and doubtful debts. The examination was ordered to be concluded.

The Affairs of C. R. PLATT, Chemist and Druggist, of Chelsea. A SITTING was held in the London Bankruptcy Court on July 24, before Mr. Registrar Hazlitt, for the public examination of Charles Rowley Platt, late of 30 Conduit Street, Bond Street, and 4 Crescent Mews, Belgrave Square, and now of 29 King's Road, Chelsea, chemist and druggist, a retired colonel in H.M. service (lately trading under the style of Godfrey & Cooke). The debtor filed his own petition on June 18. The accounts show liabilities of 6,046*l.* 8*s.* 5*d.*, and assets of 420*l.* 6*s.* 1*d.*, the following being the principal creditors as scheduled by Mr. Platt:—

	£s.	d.
Anderson & Son, distillers, 25 Holborn .. ..	303	7 4
American Traveller, 4 Langham Place .. ..	27	6 6
Best, W., & Sons, 22 Henrietta Street .. ..	23	18 2
Barry, A., Tuilerie Street .. ..	22	3 4
Brand & Co., 11 Little Stanhope Street .. ..	31	8 2
Besch, Fred., & Co., 10 Hanover Street .. ..	12	6 0
Cetti, E., 36 Brook Street .. ..	84	8 0
Cross & Sons, 18 Holborn .. ..	235	10 8
Evans, Lescher & Webb, 60 Bartholomew Close ..	23	16 1
Edwards, W., & Son, 157 Queen Victoria Street ..	157	11 8
Goss, Mrs. Harriett, Clifton .. ..	850	0 0
Gusdey & Son, 16 Woodstock Street .. ..	21	8 3
Hodgkinson, Prestons & Co., 81 Bishopsgate Street Without .. ..	32	16 9
Hodgson, C. H., 10 Salisbury Street .. ..	998	2 6
Hodgson, J. H., 3 Middle Temple .. ..	257	10
Horner & Sons, Aldgate .. ..	250	14 8
Idris & Co., 10 Ascham Street, N.W. .. ..	125	5 0
Kent, G. B., & Sons, 11 Great Marlborough Street ..	19	4 8
Khush, Cy., 30 Conduit Street .. ..	20	10 11
Lumley & Lumley, Old Jewry Chambers .. ..	18	1 11
Lepard & Smith, 29 King Street .. ..	50	5 2
Meggesson & Co., Upper Thames Street .. ..	82	6 8
Mayfield, T. J., 41 Queen Victoria Street .. ..	26	18
Maw, Son & Thompson, 7 Aldersgate Street .. ..	700	13 3
Perks & Llewellyn, Hitchin .. ..	20	9 3
Southall Brothers & Barclay, Birmingham .. ..	122	6 1
Skarfe, Mrs., 21 Rendlesham Road .. ..	1,511	0 0
Tudor Brothers, College Hill .. ..	16	12 0
Taylor & Co., 78 Great Portland Street .. ..	21	14 6
Wright & Mansfield, 104 New Bond Street .. ..	23	3 3
Wynne, Rev. C. J., Wimbledon .. ..	100	0 0
and 68 creditors under 10 <i>l.</i>		

The following is the Official Receiver's report on the debtor's statement of affairs:—The debtor states that he was formerly in Her Majesty's service and retired on half-pay in 1862, and ultimately sold out in 1870, receiving 1,800*l.* for his commission. He further states that he succeeded to the business of a chemist and druggist on the death of his mother, who had carried it on from the death of her husband, he undertaking to pay his sisters the sum of 15,000*l.* (their interest therein) out of the business, within a period of seven years from her death, which occurred about 1866, and that the whole of this amount has been paid. The debtor states in his preliminary examination, that on January 1, 1882, he had a capital in the business of 1,800*l.*, but if the private debts owing at that date, amounting to about 3,000*l.*, and which still appear to be in existence, had been taken into account, he would then have been insolvent. He attributes his failure to the falling-off in the receipts of his business, owing to the competition of stores, having to pay out of his business to his sisters the before-mentioned sum of 15,000*l.*, which left him with insufficient working capital, the want of which hampered his business, from which he has never been able to recover; and he accounts for his present deficiency by estimated loss of the capital employed in the business, owing to the before-mentioned circumstances, to the estimated loss on the sale thereof, and to the amount of his aforesaid private debts. He has produced no books (except a banker's pass-book), but states that those that were kept were handed over to the purchaser of his business in May last. Certain book-debts are stated to have been assigned about the year 1879 to a creditor for an advance of about 200*l.*, and the assignment renewed from time to time, the debt being increased by services rendered; about January of this year a new assignment was executed in favour of this creditor as trustee on behalf of himself and another; this assignment is stated to have been annulled by compromise on the disposal of the business in May last, when the outstanding book-debts (including those assigned) were made over to the purchaser thereof. The only asset shown



on the statement of affairs is an amount of cash in the hands of the debtor's solicitors amounting to 467*l.* 16*s.* 7*d.*, arising from the disposal (for the sum of 1,800*l.*) of his business in May last, which has been since handed to the Official Receiver; the debtor has been required to file an account showing the disposal of the balance.

At the first meeting of the creditors on July 13 a resolution was carried for adjudging the debtor bankrupt, with Mr. H. J. Leslie, of 4 Coleman Street, E.C., chartered accountant, as trustee, at a remuneration to be fixed by the chief Official Receiver.

On the case being called on for the public examination, Mr. Aldridge appeared for the Official Receiver, and Mr. Withers for the debtor.

Mr. Aldridge said the trustee had only just received his certificate of appointment, and was desirous of having an adjournment; with that he concurred, but wished to ask Mr. Platt a few questions. In reply to these Mr. Platt admitted having taken an assignment of the lease of a house in Piccadilly some years since, but he re-assigned it immediately afterwards. The examination was adjourned till August 6.

The adjourned public examination took place on August 6, when the Official Solicitor announced the receipt of a medical certificate to the effect that the debtor was suffering from chronic heart disease, and was quite unfit to attend for examination at present. The case was consequently further adjourned.

#### R. COBDEN COX, Brighton.

AT the Brighton Bankruptcy Court, on July 9, before the Registrar (A. O. Jennings, Esq.), Mr. Richard Cobden Cox came up for his public examination in bankruptcy. The statement of affairs showed assets nearly 500*l.* and a deficiency of about 2,700*l.*, irrespective of some shares since recovered of the value of nearly 1,000*l.*, so that the deficiency was reduced by this amount. As to the cause of his bankruptcy, the debtor attributed it to his having been discharged as managing director of the Sussex Drug Company. He sold his business of a chemist in the Queen's Road to the Sussex Co-operative Drug Company for 10,000*l.*, taking shares to the amount of 8,000*l.*, and endeavoured to carry on the business faithfully, but after he had been in fifteen months they said they should discharge him for the reason that they had only a dividend of 5 per cent. In his opinion, the cause of the small dividend was the large expenditure in the formation of the company, the considerable expenses of the two secretaries, the heavy expenses incurred by the company in advertising, and so on. The debtor added that he had had considerable expenses in prosecutions and law-suits with Mr. Munster. Mr. F. G. Clark (the trustee): What was your salary as managing director? The Bankrupt: 500*l.* a year.—Mr. F. G. Clark: And when you were discharged from the company was that 500*l.* withheld from you? The Bankrupt: Yes.—Mr. Clark: How many years were you engaged for? The Bankrupt: Five years.—Mr. Clark: How many years' salary did you receive? The Bankrupt: Fifteen months.—Mr. Clark:—Then you lost, from being discharged summarily, three years and nine months' salary? The Bankrupt: Yes, 1,875*l.*—The examination was ordered to be closed. On July 16 the examination was reopened. Mr. Joseph Sheppard, Secretary of the Sussex Co-operative Drug Company, said he had been directed to correct certain mis-statements by the debtor. Mr. Cox had said he received 10,000*l.* for his business; he really received 10,000*l.* in cash and 8,000*l.* in fully paid-up shares. Mr. Cox had also attributed his bankruptcy to his dismissal as managing director of the company; but, while the debtor had called a meeting of his creditors on April 21, 1884, he was not dismissed till May 14 following. Mr. Cox re-asserted that he was dismissed by the Co-operative Drug Company before his bankruptcy; he was not made a bankrupt till August. Ultimately the examination was closed.

**QUININE AND IODIDE OF POTASSIUM.**—It is generally believed that quinine sulphate and potassium iodide are incompatibles, a reaction taking place between them which liberates free iodine. Dr. Rabuteau, of Paris, has stated that the combination of the two remedies often gives rise to intestinal trouble, weak pulse, &c. Dr. Emmanuele, on the other hand, claims that a combination of 6 grains of quinine with 15 grains of the iodide is always tolerated, and is given with the happiest results in severe cases of malarial fever.

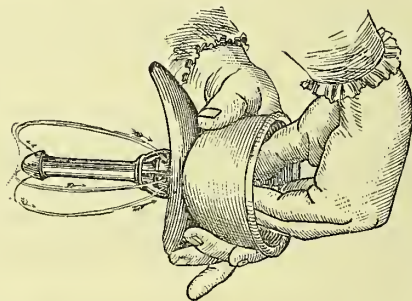


#### A FIVE-MAN POWER GAS-ENGINE.

MESSRS. CROSSLEY BROTHERS, of Openshaw, Manchester, have introduced a little gas-engine, occupying a space only 3 feet square and 5 feet 8 inches high, which is likely to be very popular among small manufacturers. It consumes gas at the rate of 25 cubic feet per indicated power per hour. The power given off on the pulley is about one-horse, but if less is required down to one man power the governor automatically shuts off the supply. All working parts are easily replaceable, and are made strictly to gauge. The "Otto" principle, on which this engine is made, has secured no less than fifty gold and silver medals.

#### THE "PALLAS" SYRINGE.

THIS syringe, which has long been known in America, is now introduced to this country by its proprietor, Dr. C. Jensen, through Messrs. Walker, Trock & Co., of 82 City Road, as exclusive British agents. It is intended for vaginal



and rectal use. The ball of the syringe is made so that it can be completely emptied; the nozzle is made so that five diverging jets are delivered at right angles, thus washing the sides of the cavity, and by a pumping action of the ball the fluid can be returned again and again. A special shield prevents spilling and soiling of linen. Much thought and ingenuity has evidently been applied to adapt this syringe to its special purposes.

#### SCHERING'S PATENT IODOFORMIUM ABSOLUTUM.

MESSRS. A. & M. ZIMMERMAN are now introducing iodoform made by Mr. Schering by a patent process, the basis of which is the use of electricity. Dr. O. Schlickum, President of the Commission of the German Pharmacopoeia appointed by the Deutsche Apotheker Verein, who has examined it under the microscope, speaks of it in highly favourable terms. He says that it is in hexagonal scales, which have a very soft smooth feel, while the ordinary commercial iodoform prepared by precipitation feels much harder and more sandy, although it is in smaller particles. He says that iodoformium absolutum is to be preferred in surgery to any other make. Besides this the odour of the new kind is very faint when compared with what we have been accustomed to, and this alone is a great advantage. The invention will probably do something to restore the waning popularity of this disinfectant.



## Trade Notes.

IN Mr. John Centreton's advertisement in our last issue his address was, by mistake, printed as 42 instead of as 24 Nile Street, City Road, N.

\* \*

THE A1 BRAND MENTHOL DEPÔT now supply free a very neat and convenient glass counter-case with an order for not less than three dozen of their articles, the order not to include more than one dozen of the sixpenny size.

\* \*

MR THOS. P. BETHELL, Cable Street, Liverpool, is advertising an ingenious combination of mill-board and corrugated paper, which, by a series of cuts and gashes, has been converted into a parcels post box for the conveyance of bottles and the like. It folds quite flat for stowing, and seems well adapted for its purpose.

\* \*

MESSRS. BARNETT & FOSTER very sensibly recommend chemists who would not have trade enough for a regular soda-water fountain to set up a side counter with syphons and an assortment of flavouring syrups for draughts. This would lead to an immediate profit, and probably to orders for both syphons and syrups.

\* \*

REFERRING to Messrs. Maw's announcement offering to pay carriage on 5*l.* orders, Messrs. May, Roberts & Co. ask us to state that they offered to do this in March, 1877, but that, after trying the system for some time, they found it was generally preferred by their customers that they should allow an extra 5 per cent. By so doing they were in a position to receive enclosures also.

\* \*

MR. THOMAS WAITE, who commenced business as a valuer about three years ago, has taken into partnership Mr. Thos. Battman, and the new firm has removed to Finsbury Pavement. Mr. Battman has been for many years in the export department of Messrs. Hearon, Squire & Francis, and Mr. Waite obtained some of his experience in the same establishment. They now add the business of commission agents to that of valuing.

\* \*

IN another part of our paper will be found a notice with reference to a case in which a firm, trading under the style of "Moorhouse & Co.," had used one of the casks of Messrs. Hill, Evans & Co., the well-known vinegar-makers of Worcester. The latter firm have abstained, as will be seen, from taking legal proceedings, but the case shows how important it is for purchasers to see that they are not imposed upon.

\* \*

THE well-known firm of Seabury & Johnson, manufacturers of plasters and other surgical goods, has undergone a general reorganisation during the month. Mr. George C. Hallett, late a trustee and treasurer, has resigned his office, and withdrawn from all connection with the firm. His place is taken by Mr. J. M. Peters, for several years editor of the *Oil, Paint, and Drug Reporter*. Mr. R. W. Johnson, late a trustee and secretary of the corporation, also retires from the concern to devote himself to the cattle business in Colorado, in which he is already interested. It is reported that he has sold his interest for \$250,000 to Mr. George J. Seabury, who thus becomes sole proprietor of the concern. Mr. Seabury is known to many in this country, who will heartily wish him success in his enterprise.

THE GERMAN PHARMACEUTICAL ASSOCIATION (Apotheker Verein) comprises 2,750 members, and has an income from subscriptions of 1,650*l.*

COMMERCIAL TRAITORS.—The *Chemiker Zeitung* proposes that foremen, managers, &c., who go abroad to utilise business secrets which they have acquired in Germany should be included among criminals whose extradition may be demanded.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

**Acid-taps, &c.**—8,499.—July 14, 1885.—W. Allen. Improvements in acid taps and valves, and seats for chemical works.

**Aërated Beverages.**—8,131.—July 4, 1885.—J. E. Consté. An improved apparatus for.

**Alkalies.**—8,392.—July 11, 1885.—W. P. Thompson.—A communication from B. Osann, Germany. A new or improved process of manufacturing caustic alkalies during the purification of iron by the Thomas-Gilchrist process.

**Alum, &c.**—8,260.—July 8, 1885.—T. Robinson. Improvements in the manufacture of.—8,382.—July 11, 1885.—H. Richardson. Improvements in the manufacture of hydrate, sulphate, and other salts of alumina.

**Aluminium.**—9,146.—July 30, 1885.—J. B. Thompson and W. White. Improvements in the reduction of aluminium from its salts, and apparatus for the purpose.

**Antiseptic Compound.**—8,999.—July 25, 1885.—F. G. Broxholm.

**Azo Colours.**—9,214.—July 31, 1885.—M. Hoffmann and A. Weinberg.

**Bottles.**—8,509.—July 14, 1885.—W. B. Fitch.—9,105.—July 29, 1885.—P. Gaskell.

**Bottle-filling.**—8,165.—July 6, 1885.—A. Werner. Improvements in apparatus for filling bottles with highly-aërated liquids without pressure.

**Bottle-holder.**—8,839.—July 22, 1885.—T. White. An improved adjusting bottle-holder.

**Bottle Stopping.**—8,198.—July 7, 1885.—F. G. Riley.—8,261.—July 8, 1885.—J. Webb.—8,374.—July 10, 1885.—W. & T. A. Coultas.—8,510.—July 14, 1885.—W. B. Fitch.—8,625.—July 16, 1885.—C. M. Taylor and A. P. Turner.—8,667.—July 17, 1885.—J. H. Weston.—8,950.—July 24, 1885.—C. Cheswright.—8,975.—July 25, 1885.—J. Lees.—9,068.—July 28, 1885.—W. W. Rogers.—A communication from the Johannes Brunnen Company.

**Bottle-tools.**—8,186.—July 6, 1885.—T. Sutcliffe.—8,400.—July 11, 1885.—A. J. T. Wild.

**Bottling-apparatus.**—8,447.—July 13, 1885.—F. G. Riley.

**Catheters.**—8,249.—July 7, 1885.—J. Banks.

**Carbonate of Potassium.**—8,993.—July 25, 1885.—F. Brünjes. An improved process for the production of carbonate of potassium from chloride of potassium or sulphate of potassium.

**Chlorine.**—8,470.—July 13, 1885.—F. Maxwell-Lyte.—8,724.—July 20, 1885.—W. P. Thompson.—A communication from Solvay & Co. Improvements in the manufacture of chlorine from by-products of the ammonia soda process or similar chemical obtained from other source.

**Chloroform, &c.**—8,523.—July 14, 1885.—H. E. Newton.—A communication from G. Michaelis and W. T. Mayer. Improvements in the manufacture of chloroform and acetic acid or purified acetates.

**Copper Precipitates (Purifying).**—8,418.—July 11, 1885.—J. Y. Johnson.—A communication from E. Deligny.

**Copper-refining.**—8,661.—July 17, 1885.—W. Wood and M. H. Hurrell. Improvements in apparatus for refining copper and other metallic mattes by electrolytic and chemical actions.

**Filling Apparatus.**—8,599.—July 16, 1885.—J. McEwen. Improvements in apparatus for filling and syringing aërated beverages.



- Decarbonating Carbonates of Strontia, &c.**—8,541.—July 14, 1885.—H. Leplay.
- Dental Appliances.**—8,598.—July 16, 1885.—R. Marston. —8,267.—July 8, 1885.—T. W. F. Rowney. An improvement in the construction of impression-trays for dental and other purposes.
- Disinfectants.**—8,406.—July 11, 1885.—W. Dalrymple Bolland.
- Filters.**—8,723.—July 20, 1885.—W. P. Thompson.—A communication from Solvay et Cie. Improvements in filters applicable for caustic-soda solution.
- Filtering Apparatus.**—8,527.—July 14, 1885.—W. R. Lake. A communication from J. W. Hyatt.
- Filtering Material.**—8,282.—July 8, 1885.—O. F. Öberg. A new mode of manufacturing filtering material for purifying water from micro-organisms.
- Generating Carbonic Acid Gas.**—8,692.—July 18, 1885.—F. Foster. Generating carbonic acid gas automatically.
- Glycerine.**—8,403.—July 11, 1885.—A. Michel. Improvements in apparatus for treating fatty matters in order to obtain fatty acids and glycerine therefrom.
- Ink.**—8,241.—July 7, 1885.—T. Frusher. Improved manufacture of ink from waste dye liquors.
- Iodine Colloid.**—8,597.—July 16, 1885.—E. Kent. Iodine colloid for external medicinal use.
- Metallic Drums, &c.**—9,231.—August 1, 1885.—H. W. Todd. Improvements in metallic drums for containing chemical and other substances.
- Plastic Compounds.**—8,736.—July 20, 1885.—H. W. Merritt.
- Phosphoric Acid, &c.**—8,916.—July 23, 1885.—C. F. Claus, jun.
- Salt, &c.**—8,194.—July 6, 1885.—B. J. B. Mills. A communication from J. M. Duncan. Improvements in means or apparatus employed in the manufacture of salt from brine and in producing strong brine for the manufacture of soda-ash, and other chemicals.
- Sea or other Salts.**—8,482.—July 14, 1885.—F. W. Holloway. The improvement of sea or other salts used for the purpose of baths, or in lieu of sea-bathing, or for any outward application.
- Silicates of the Alkalies.**—8,838.—July 22, 1885.—W. P. Thompson. A communication from J. and F. Weeren.
- Spoon.**—9,151.—July 30, 1885.—C. E. Challis. Improved spoon for administering liquid food and medicine to infants.
- Sulphurous Acid Gas.**—8,074.—July 3, 1885.—C. C. Springer. Improvements in the manufacture of sulphurous acid gas (SO<sub>2</sub>) and in the apparatus employed in such manufacture.
- Sulphuretted Hydrogen, &c.**—8,440.—July 13, 1885.—E. W. Parnell and J. Simpson. Improvements in obtaining sulphuretted hydrogen from sulphide of ammonium.
- Treating Sweet Potatoes, &c.**—8,925.—July 23, 1885.—A. Ralu, fils, J. Grathwohl, and H. A. Brown. Improvements in the preparation and treatment of sweet potatoes, yams, and arums, and the manufacture of spirit from these vegetable substances.
- Vapourisers for Perfume, Medicine, &c.**—8,750.—July 20, 1885.—T. Brown. A communication from E. H. Gouge. Improvements in vapourisers for perfume, medicine, disinfectants, and other substances; suitable also for inhaling purposes.
- Vessel for Containing Effervescing Drinks.**—8,796.—July 21, 1885.—W. Reid. Improvements in the construction of a vessel for containing separately the solutions composing effervescing and other drinks, and for mixing the same as they may be required by the consumer.
- Specifications published during the month:—  
Postage 1*d.* each extra.  
1884.
- 9,317. W. Spence. Production of sulphuric acid. 6*d.*
- 9,761. A. C. Henderson. Extracting sulphur and sulphurous acid from pyrites. 6*d.*
- 10,080. W. Robinson. Making sodium carbonate, &c. 2*d.*
- 10,509. W. R. Lake. Hermetically closing bottles, &c. 6*d.*
- 10,812. J. Mactear. Furnaces for chemical processes. 6*d.*
- 10,813. J. Mactear. Recovering manganese oxide for manganese sulphate produced in obtaining chlorine. 2*d.*
- 10,860. H. E. Newton. Anhydrous sulphuric acid. 6*d.*
- 10,871. C. D. Abel. Recovering the nitrous products in the manufacture of sulphuric acid. 6*d.*
- 11,035. W. Weldon. Manufacture of chlorine and hydrochloric acid. 4*d.*
- 11,036. W. Weldon. Manufacturing chlorine from hydrochloric acid. 4*d.*
- 11,152. F. Foster. Aërated-water pumps. 4*d.*
- 11,250. J. Dempster. Extracting tar and ammonia from the gases of blast-furnaces. 6*d.*
- 11,318. M. Emanuel. Stoppers for bottles. 6*d.*
- 11,403. H. H. Lake. Extraction of oil, &c., from flax and other seeds. 4*d.*
- 11,597. R. Bateman. Stoppers for bottles and jars. 6*d.*
- 11,641. E. J. Leveson and J. W. Slater. Treatment of sewage, &c. 4*d.*
- 11,711. A. Feldmann. Manufacturing ammonia. 4*d.*
- 11,713. H. W. Caton and A. R. Stocker. Screwed stoppers for bottles, &c. 6*d.*
- 11,775. H. Gaskell. Purification of bicarbonate of soda, &c. 6*d.*
- 11,805. P. M. Justice. Phosphates. 4*d.*
- 11,896. H. Botten. Stopping bottles. 4*d.*
- 12,359. J. S. Burgess. Trusses for the support and cure of hernia. 6*d.*
- 12,421. W. L. Wise. Obtaining hydrochloric acid gas from a solution of hydrochloric acid. 4*d.*
- 12,453. D. Rylands. Internally-stopped bottles. 6*d.*
- 12,585. J. O. Mackle. Sampling and testing apparatus for spirituous liquors, &c. 6*d.*
- 12,643. W. Donaldson and others. Purification of sewage, &c. 6*d.*
- 12,713. W. G. Gard. Disinfectant, &c. 2*d.*
- 12,830. J. W. Slater. Agents for the treatment of sewage, &c. 4*d.*
- 13,045. J. H. Johnson. Manufacture of sulphide of zinc, &c. 4*d.*
- 1885.
381. E. W. Parnell and J. Simpson. Utilisation of alkali waste, &c. 6*d.*
- 1,245. D. Rylands. Tools for forming bottle-mouths. 6*d.*
- 2,206. H. J. Haddan. Production of soluble combination of certain azo-compounds with bi-sulphites, &c. 2*d.*
- 3,386. N. C. Cookson. Smelting sulphide of antimony. 4*d.*
- 3,871. F. T. Marwood. Withdrawing corks from bottle-necks. 6*d.*
- 5,216. W. P. Thompson. Production of phosphate of soda or potash from basic-process slags, &c. 2*d.*
- 5,268. W. R. Lake. Grooving the necks of bottles. 4*d.*
- 5,385. C. E. Avery. Manufacturing aërated waters, &c. 2*d.*
- 5,822. E. M. Moore. Fastenings for surgical belts, stays, &c. 4*d.*
- 5,991. A. M. Clark. Quantitative estimation of hæmoglobin in the blood. 6*d.*
- 6,065. W. P. Thompson. Concentrating aqueous solutions, &c. 6*d.*
- 6,127. C. A. Bartsch. Stills for concentrating sulphuric acid. 6*d.*
- 6,269. J. Blocksidge. Necks of bottles, &c. 4*d.*
- 6,405. E. Hänisch and M. Schroeder. Obtaining liquid, anhydrous sulphurous acid from furnace gases, &c. 4*d.*
- 6,459. F. R. Conder. Purification of water, &c. 2*d.*
- 6,505. R. R. Kelly and A. C. L. Weigel. Water-filters. 6*d.*
- 6,661. A. M. Clark. Starch, glucose, &c. 2*d.*
- 6,912. J. Wilkinson. Hair restoratives. 2*d.*
- 7,016. E. E. Waters. Treating fish roe to obtain a substitute for albumen. 2*d.*
- 7,884. E. M. Moore. Catarrh preventative. 2*d.*



## THE GAZETTE.

## COMPANY WOUND UP.

LACTINA MANUFACTURING COMPANY (LIMITED). Off. Liq.—Henry. Crunden Sargent, accountant, 5 Salter's Hall Court, Cannon Street By Order.

## ADJUDICATION ANNULLED.

PHILLIPS, JOHN, 1, 153, and 154 Marine Parade, Brighton, chemist, druggist, and lodging-house keeper. Adj. January 25, 1884.

## RECEIVING ORDERS.

FRYER, JOHN, 16 Mandale Road, South Stockton, chemist and druggist. July 8.

TEMPFST, RICHARD SPENCER, Graham Street, and Lower Ernest Street, Bradford, wholesale druggist and drysalter; trading as "R. S. Tempest & Co." July 21.

## DIVIDENDS.

WHITTLES, HENRY, 316 Wheeler Street, Lozells, Birmingham, chemist and druggist. Composition of 7s. 6d. by three equal instalments, at one, four, and nine months. Court—Birmingham.

WOOD, DAVID, Bingley, chemist and druggist. First and final div. 3s. 2½d. on July 20, at Off. Rec. office, Ivegate Chambers, Bradford.

## PARTNERSHIPS DISSOLVED.

BARCLAY & SON, Regent Street and Wigmore Street, wax-chandlers and lamp-makers. (Hugh Barclay and Hugh Donald Barclay.) As regards H. Barclay. July 1. Debts by H. D. Barclay.

BELL, PEMBROKE & CO., Waterloo Road, drysalter, chemical importers, and chemists' sundriesmen. July 4. (Alfred William Bell and William John Eastes Pembroke.)

HARRISON, HUGH FRAT, and WILSON, CHARLES JOSEPH, Red Lion Square, consulting electricians and chemists. July 15.

MORET, VENNING & ALLEN, Phoenix Chemical Works, Poplar, in the manufacture, preparing, and selling of certain patent articles called the "Inoffensive." July 24. (Jules Louis Moret and John Allen.) Debts by Allen.

PELLOW BROTHERS, Bude Haven, Stratton, grocers, tea-dealers, wine and spirit merchants, and chemists and druggists. July 20. (James Croker Pellow and Lucius Henry Pellow.) Debts by J. C. Pellow.

PICKERING & YEARDLEY, Little John Mill, Clifton Bridge, Clifton, par. Dewsbury, manufacturing chemists. July 10. (James Pickering, Joseph Walker, exors. of Charles Pickering, dec., and James Yeardley.) Debts by Yeardley.

PRICE, NAPOLEON & CO., Cumming Street, Pentonville, manufacturing perfumers and soap-makers. July 22. (Rees Penry Napoleon Price and Arthur John Barrett.) Debts by Barrett.

SEDGWICK & PEDLEY, Park Cross Street, Leeds, mineral-water manufacturers and opticians. July 9. (Robert George Hopkinson Sedgwick and Robert Pedley.) Debts by Sedgwick.

## ADJUDICATIONS.

COOPER, JOHN RAMSAY, 17 High Street, Canterbury, chemist. July 24.

DUNN, FREDERICK EDWIN, Sudbury, chemist. July 27.

FRYER, JOHN, 16 Mandale Road, South Stockton, chemist and druggist. July 8.

LANDAU, MAX, 9 Mincing Lane, aniline dye manufacturer; trading as "Landau & Co." July 18.

## Trade Report.

THE value of both imports and exports continues to decline. During the month of July, imports to the value of £1,847,616½. were received. In July, 1884, the value recorded was £4,203,416½. The great bulk of this difference was due to a large falling-off in raw materials, especially those for textile industries. Exports of home produce were valued at £9,173,846½; in July, 1884, they were £21,039,922½. Almost every class of business shares in this decline. There occurs a considerable increase in our re-exports of foreign and colonial produce, these being estimated at £5,835,372½., a gain of £4,146,502½. This goes to the credit of our mercantile and shipping businesses.

The imports of the month show a singular drop in the rivals of quicksilver, which are reported as follows:—

Quantity	July, 1883	July, 1884	July, 1885
.. lbs.	1,369,935	285,155	32,025
Value .. £	100,591	22,408	2,515

The quantity imported this year is, however, nearly equal to the average. Chemical manufactures imported, not including alkali or dyes, were valued at 116,603½. in last July, against 150,455½. and 135,516½. in July of 1884 and 1883 respectively.

Coal-tar dyes (aniline, alizarine, &c.) figure for about 36,000½., 68,000½., and 32,000½. in July 1885, 1884, and 1883 respectively. The quantity of Peruvian bark received was 13,000 cwts., a rather increasing proportion, but of declining value, this being worth 84,000½., while last year 11,000 cwts. were valued at 98,000½. During the month about 9,000 cwts. were re-exported. Gum arabic is again coming forward in normal quantity, 8,058 cwts. having been received last July, against 2,482 in July, 1884. The average value, however, has not much declined. Last year it averaged a little over, this year a little under, 3½. per cwt. The value of "Drugs unenumerated" shows a renewed falling-off. These figure thus:—

July, 1883	..	..	..	..	..	£110,175
July, 1884	..	..	..	..	..	66,310
July, 1885	..	..	..	..	..	58,712

The export trade in chemicals seems to be fairly maintained, as the following will show:—

## Exports.

	July, 1883	July, 1885	July, 1885
Alkali .. .. . cwt.	479,996	473,871	549,809
.. .. . value £	152,426	158,340	162,912
Bleaching materials .. .. cwt.	111,300	126,695	120,113
.. .. . value £	36,140	48,942	40,880
Medicines, &c. .. .. .	80,512	69,259	68,136
Foreign chemicals re-exported value £	24,702	26,027	16,203

## MINCING LANE, August 13.

THE present state of business in Mincing Lane is somewhat difficult to describe. In many articles during the last month trade has been of a restricted nature, holders generally showing unusual firmness however, and often preferring to refuse business rather than make any concession in prices, while, on the other hand, in a few articles the transactions have been of considerable extent, and amongst the latter we may specially mention bark, camphor, glycerine, and quinine; and in both cases a generally much firmer and more confident tone has been manifested.

The Board of Trade returns are again disappointing in both imports and exports, although, considering the political "situation," the recent change of Government, and the coming general election, upon the result of which so many matters of the greatest importance concerning our future foreign policy depend, it is only natural that the shipping trade of the country should meanwhile assume a contracted form.

Bank rate has remained unaltered at 2 per cent.

ACIDS.—Citric met with a very firm market during the second half of last month, advancing to 1s. 8d. per lb. for forward delivery; but the demand has since somewhat given way, and although quotation remains at 1s. 7½d. per lb. for spot, there are no longer buyers at 1s. 8d. per lb. forward. Tartaric continues steady at late rates.

ALOES are in improved demand, and of 128 packages Cape offered in last sales, 42 packages sold at prices of 27s. to 39s. 6d. per cwt. Six kegs Socotrine found buyers at 8½. per cwt., and 124 packages Curaçoa gourds at 50s.; boxes 30s. to 32s. per cwt.

ANTIMONY.—There being less crude offering, prices are steadier, at 21½. 10s. to 22½. per ton.

BALSAMS continue generally depressed, although better prices have recently been paid for Peru of good quality.

BARK.—Sales held last Tuesday were by far the largest on record, and comprised 3,043 packages South American, 3,743 packages Ceylon, and about 100 packages of other sorts, representing a total weight of 425 tons, or about 1,000,000 lbs.

Notwithstanding this unprecedented quantity, the greater part of the Ceylon offered sold at rates fully up to former ones, the quinine unit value being maintained at 5½. to 6½.

The quantity offered equals about one month's shipments from Ceylon at the present time. It is reported from Ceylon that bark is coming forward for shipment much more slowly than usual, and that higher prices are ruling there in consequence. Be that as it may, the island has done remarkably well up to the present, when we consider that whereas, ten years ago, in 1875, her total shipments amounted to only 18,731 lbs., they have increased in an extraordinary manner



year by year until the total for 1884 reached 11,494,947 lbs.; and up to June 20 last shipments were 2,000,000 lbs. more than in the corresponding period of the previous year.

A great deal has been said as to whether the industry is a paying one or not, and beyond a doubt it has to more than a few ended in disaster; but a great many people often benefit by other people's misfortunes, and we are inclined to think that unless it were on the whole a profitable business, it could not have sustained during ten years the extraordinary development it has done.

**BORAX.**—The lower rates of 35s. to 37s. per cwt. now asked have not been, we believe, productive of large business up to the present.

**CALUMBA ROOT.**—Of 67 bags offered in last sales, 52 bags sold at prices ranging from 19s. to 22s. 6d. per cwt., while some fine washed made 66s.

**CAMPHOR.**—Notwithstanding that speculation in the raw material appears to have temporarily ceased, the position of this valuable article remains a strong one, and holders show no disposition to give way. In the refined qualities business, since our last report, has continued extensive at unchanged rates, and stocks of raw camphor have become considerably reduced during the last month.

**CAMOMILES.**—The new crop flowers are now on the London market, and, as might be expected with such a season, quality is good and bold. Present price of 70s. per cwt. will, no doubt, shortly give way to lower rates.

**CANTHARIDES.**—There is a steady demand for good Russian flies, and spot lots are difficult to obtain at reasonable prices.

**CARDAMOMS.**—Of 159 packages offered in last drug sales 32 packages sold at low prices. The rapidly increasing production of cardamoms in Ceylon is worthy the attention just now of all who are interested in the article, the quantity shipped from there this season being more than double that of last season.

**CASSIA LIGNEA**, after a good "run," has become flat again at 28s. 6d. per cwt.

**CLOVES.**—The large quantity of 891 packages offered in yesterday's spice sales has damped the market. Only 110 packages sold, good bright Zanzibars being obtainable at 5d. per lb.

**COCA LEAVES** are now coming plentifully forward, and of 89 bales offered in last drug sales, 33 bales sold at low price of 1s. 2d. per lb.; rest out.

**COCAINE** has met the fate of most novelties, and now greatly reduced quotations are made for it.

**COCHINEAL.**—A steady market continues, but without change in prices.

**CREAM OF TARTAR** remains in poor demand, and price of first white has been reduced to 127s. per cwt.

**CUBEBS.**—The high prices generally asked by holders are causing small business only, and where sellers are anxious to realise slight concessions have to be made. Stocks are at present low, but against this new crop arrivals are being looked forward to.

**ESSENCE OF LEMON.**—Although producers are already asking higher rates for new crop essence in Messina, prices here continue to be remarkably low, even for good qualities.

**GALLS.**—In face of recent large arrivals and the considerable stock now here, prices are more nominal than actual at 47s. to 50s. per cwt., according to quality.

**GINGER** is offering in plentiful supply, and the demand being slow a general decline in values of about 1s. to 3s. per cwt. all round has ensued.

**GUM ARABIC.**—Of 737 packages East India offered in last sales some 162 packages found buyers at about current rates. 68 bales Turkey sorts were offered, but bought in.

**GLYCERINE** continues to improve, and a proof of the better position of the article is the great difficulty now experienced in obtaining offers of anything like a quantity. The raw material has advanced in price 15 to 25 per cent., and from all we hear about it we consider that those who can secure their full winter requirements at once will have no reason to regret having done so later on.

**HONEY.**—In last drug sales 105 kegs New Zealand found buyers at 24s. to 36s. 6d. per cwt., according to quality. Of 52 casks Jamaica 17 casks sold at 24s. to 32s.; and some fine Chilean was bought in at 35s. per cwt.

**IODINE.**—Very steady, without alteration in prices.

**IPECACUANHA.**—With the demand continuing this article is more firmly held, and some sound root has been sold at 4s. 6d. per lb.

**ISINGLASS.**—At the monthly sales held July 28 the improved quantity of 628 packages East Indian was offered, and with more disposition to buy 200 packages were disposed of, but, with one or two exceptions, prices generally showed a slight decline in value. *Penang.*—Of 203 cases, 110 sold. Tongue: Mixed to good pale, 3s. 3d. to 3s. 4d.; middling, 2s. 10d. to 3s.; low dark to ordinary, 1s. 2d. to 2s. 2d. per lb. Purse: Good to fine pale, 1s. 4d. to 1s. 6d.; dark to good fair, 6d. to 1s. 3d. per lb. Leaf: Pale bright, 3s. 4d. to 3s. 6d.; middling, 2s. 10d. to 3s. 1d.; pickings, 1s. 8d. to 2s. 2d.; scrappy, 11d. to 1s. 4d. per lb. *Bombay.*—Of 296 packages, 85 sold. Purse: Fair to fine bright bold, 1s. to 1s. 6d.; ordinary to fatty yellow, 6d. to 11d. per lb. Pipe: Bright reddish, 1s. 10d. to 1s. 11d.; low to dark red, 1s. 2d. to 1s. 7d.; greasy, 10d. to 11d. per lb. Old tongue: Ordinary dark, 1s. 3d. to 1s. 4d.; stout but inferior, 1s. 1d. per lb. Kurrachee leaf: Reddish, 1s. 4d. to 1s. 6d.; low dark, 1s. 1d. per lb. *Saigon.*—Of 121 packages, 5 sold. Fine bright pale leaf, 4s. 3d.; smaller and reddish, 3s. 1d. per lb.; rest out. Next sales, August 25.

**LEMON JUICE.**—At the end of last month prices rose considerably, until 23l. 10s. to 24l. per pipe f.o.b. Messina was reached. The tone is now quieter, however, with sellers at 23l. per lb.

**LIME JUICE** is in steady consumptive demand, at 2s. 11d. to 3s. per gallon for good quality, although some very inferior has been sold at less.

**MORPHIA SALTS** at 4s. 6d. per oz. are in demand, and lower prices are not to be expected.

**OPIUM**, notwithstanding small business, is firmly held at late rates, the new crop shipments being so far somewhat disappointing.

**OILS.**—*American Peppermint.*—H. G. Hotchkiss, presumably owing to lack of business, has given way in price to 17s. 6d. to 17s. 9d. per lb., according to quantity; and some Hale & Parshall's is now being offered in London at the same figures.

**OTTO OF ROSES.**—The weather throughout the distillation proved most favourable, and the yield this year has been somewhat above that of last season; moreover, those buyers who have acted with caution and not been too precipitous, have found the peasant proprietors more inclined to come down from their exalted ideas of the past two or three years. Thus it is that those shippers who were too eager to announce their new-crop prices, at a reduction of about 10 per cent. upon their last year's rates, have been superseded by their more deliberate and powerful competitors, who by waiting a little longer have been able to announce reduced rates fully 20 per cent. under last season's, and amongst those who can offer the greatest inducements are the shippers of the finest and best-known brands. The present quotations being exceedingly low they may be expected to rule without variation, unless, indeed, circumstances should arise to cause an upward reaction.

**PETROLEUM OIL** on the spot is slightly dearer at 6½d. to 6 15-16d., but September-December remains at 6½d. per gallon.

**PIMENTO** is much firmer, with fine bright obtainable at 2½d. per lb., and a strong market.

**POTASH CHLORATE.**—The improvement noticed in our last report has continued with good business at advancing rates, reaching to-day 7½d. per lb.

**POTASSIUM IODIDE**, steady; English make 12s. per lb.

**QUASSIA.**—The somewhat substantial quantity of 42 tons was offered in last drug sales, and failing to find buyers was bought in at 6l. per ton.

**QUICKSILVER** fell away in value until importers price touched 5l. 12s. 6d. per bottle, when an advance took place, first to 5l. 15s., then to 5l. 17s. 6d. per bottle, to-day's price; at the middle figures extensive business was done.



**QUININE.**—Prices have recovered, Howard's to 3s. 6d. per oz., and French 3s. 5d. per oz. in 1-oz. vials; Whiffen's and foreign makes in bulk 3s. per oz. There has recently been considerable business, especially in foreign makes, partly for speculation. The market appears to be recovering from the undue depression lately cast upon it by magnified reports of American competition, although those best acquainted with the article were quite able to foresee how futile such ideas must become, considering the greater advantage possessed by European manufacturers in the way of procuring the raw material. The present position of the market is very firm, although it is hinted that a large quantity of foreign make recently sold is not gone for ever.

**SAFFRON** continues in demand in consequence of the difficulties now in the way of importing from Spain, and also because it is beginning to be feared that the long continuance of the cholera in the growing districts will seriously affect the cultivation and gathering of the growing crop. Under such circumstances, with prices governed more by personal opinions than by actual facts, quotations are necessarily somewhat erratic; but, speaking generally, we should call rates about 10 per cent. dearer than they were a month ago.

**SODA.**—Crystals at current low rate of 2l. 17s. 6d. per ton ex ship here meet with remarkably small business.

**SULPHATE OF COPPER** has recovered in price to 16l. 10s. or 16l. 15s. per ton for ordinary firsts, and is firm thereat.

**TAMARINDS** continue very depressed, and in last sales 10 packages Dominica were sold at 9s. 6d. to 12s. per cwt.

**TURPENTINE** has met with a considerable fall in value, American spirit being now quoted:—Spot, 27s; September-December, 27s.; and January-April, 28s. per cwt.

#### NEW YORK, August 1.

THE drug market for the past month, although still dull, is not entirely without feature, as several important movements have taken place, as will be seen below. Highly encouraging crop prospects and harvesting operations that have thus far proved successful promise an early improvement in demand. At present speculation, which is usually rampant, is not very life, and the market presents a rather quiet and tame appearance.

The prices in parentheses in sterling are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers are, therefore, see at a glance the course of this market compared with their own.

**BALSAMS.**—A large decline has again taken place in *copaiba*. Arrivals continue large, stocks are abnormally heavy, and demand light, all tending to depress an already falling market. Para has been sold from importers' hands at 8c. (1s. 3½d.); bright thick Maranhã, 27c. (1s. 3d.), and Jaracibo, 25c. (1s. 2d.). *Camada*, for want of demand, has also declined to 32c. (1s. 5½d.). *Tolu* appears not to have reached anything like bottom yet, although sales have been made at 30c. (1s. 4½d.).

**TONCA BEANS.**—*Angostura* are a little easier at \$1.65 (7s. 4d.), and the market has assumed a firm but quiet tone. *Para*—prime, 60c. (2s. 8d.); fair, 40c. (1s. 9d.).

**CAMPHOR** has been very active, and a considerable advance in prices has been established. Refined in barrels is now quoted 22c. (11½d.), in 4 oz. blocks 23c. (1s. 0½d.). A demand for crude from Europe has more than anything else helped the rise, for the spring demand was over, and stocks were heavy.

**COCA LEAVES** are again cheaper; the demand has greatly fallen off, and arrivals continue large. Exports amounted to 1,000 lbs., price about 45c. (2s.). *Cocaine* is quoted by some makers at \$1.00 (4s. 4d.).

**GUM CHICLE.**—During the month no less than 700l. worth has entered for shipment to Liverpool; there must be an increasing demand for this article.

**QUININE.**—The price of American brands has remained all the month at 68c. for bulk (3s.), but some of them, in order to meet German competition during the early part of the month, were selling fully 5c. per oz. below this. About ten days ago a speculative movement set in amongst second-hand holders, and gradually the agents of the foreign manufac-

turers joined in it, and kept raising their figures till 68c. was reached; some of them then withdrew all offers, while some reported no stocks, and everything was done to get the domestic manufacturers to advance their figures, but without success up to this. Of course the home makers are doing the bulk of the trade, and as they will on no account sell to speculators, they have the trade well under control. At the same time the European market is closely watched, and if the makers there advance their rates above those ruling here, we may again see quinine shipped back to Europe. Last month 11,000 oz. were entered as exported.

**OIL PEPPERMINT.**—There has been a much better demand, and about 3,250 lbs. were shipped in July; still the inquiry is not what was anticipated for the time of year, and prices are if anything a little easier. H. G. Hotchkiss is in very small supply, and quoted \$4.00 (18s. 6d.) in small lots; no large parcels can be had. **BULK OIL** is in such short supply that the one or two holders will not accept less for it than the price mentioned. There can now be little doubt that the crop this year will be fully up to an average, unless very unfavourable weather prevails during next month. Still, stocks left here are so small, and there are such a number of buyers waiting for it, that it is not anticipated low rates will prevail.

**ROOTS.**—*Jalap* does not receive much attention, and fair can be had at 11c. (6½d.); most of the arrivals go forward to Hamburg. *Mexican Sarsaparilla* comes to hand only in small lots; 10 bales were sold to-day for 10c. (6½d.). *Senega*: the new roots are coming to hand freely, but do not appear as yet to be of a prime quality, being mostly dark and not well dried; later the picked roots will come on the market, but will be dearer than the figure now asked, viz., 43c. (2s.). *Serpentaria* is also arriving in a small way, but is still very dear, 40c. (1s. 10d.) being about the price.

**ESSENTIAL OILS.**—Stocks being large and no demand existing, holders of *Sassafras* push sales almost at any price, and as low as 40c. (1s. 9d.) has been accepted. This oil is said to be often sophisticated, and a low price, although tempting, demands caution in purchasing. *Wintergreen* is also very cheap; \$1.80 in tins (7s. 10d.) will buy a strictly pure article.

**BROMIDE POTASSIUM** meets with good demand at 34c. (1s. 5¾d., 5 per cent.). Shipments now take place to all parts of the world.

The following were the Stocks of the chief Drugs, Gums, &c., in the Port of London on July 31:—

	1885	1884		1885	1884
Aloes .....	3,235	3,442	Gum (cont.)—		
" .....	30	6	Asafoetida.. pkgs	891	774
" .....	208	68	Benjamin .. "	1,588	1,880
Aniseed, Star chits	207	329	Damar .. "	3,600	3,262
Arrowroot .....	14,984	13,434	Galbanum .. "	18	29
" .....	4,080	5,359	Gamboge .. "	123	164
Balsam .....	429	194	Guaiacum .. "	74	55
Bark, Medicinal			Kino .....	159	159
" .....	2,804	4,053	Kowrie .....	1,401	808
" .....	72,748	84,893	Mastic .....	179	274
Borax .....	525	697	Myrrh, E.I. ..	164	166
Bees' wax .....	966	854	Olibanum .. "	6,524	6,996
" .....	1,000	646	Sandarach .. "	1,493	1,560
" .....	75	42	Tragacanth ..	1,721	1,679
Wax, Jap. vgtbl. pk	927	1,978	Indigo, E.I. .. chits	13,260	18,247
Camphor .....	6,548	7,706	Spanish ....	2,359	3,499
Cardamoms .....	783	630	Ipecac .....	86	233
Cochineal, srns, &c.	8,600	10,609	Jalap .....	228	361
Coccoloba, Ind. bgs, &c.	334	477	Nux Vomica .. pkgs	722	512
Colombo root pkgs	1,223	1,926	Oil—		
Cream tartar .....	59	76	Castor .....	476	476
Cubebs .....	71	228	" .....	4,668	14,356
Dragonsblood chits	117	160	Palm .....	280	121
Galls, China & Jap.			Cocoanut .....	2,539	3,157
" .....	5,649	3,497	Olive .....	1,430	983
E.I. .....	1	650	Aniseed .....	348	318
Trky & Prsn sks	5,015	3,969	Cassia .....	113	287
Gum—			Opium .....	1,993	1,534
Ammoniac pkgs	197	234	Rhubarb .....	1,291	617
Animi & Copal			Saltpetre, Nit. Pot.		
" .....	8,488	6,773	" .....	2,737	3,268
Arabic, Barbary			Nitrate Soda ..	2,916	2,449
" .....	2,414	1,455	Sarsaparilla .....	286	606
Turkey ..	2,001	3,187	Senna .....	1,296	1,830
E.I. ....	6,447	1,100	Shellac, total chits	54,514	51,063
			Turmeric .....	987	886
			Vermilion .....	—	25



# Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

## CHEMICALS.

ACIDS—		Last Month		This Month	
Acetic	per lb.	0 2½	0 0	0 2½	0 0
pure	"	0 5	0 9	0 5	0 9
glacial	"	0 6	1 0	0 6	1 0
Benzole Sublimate	"	0 0	3 6	0 0	3 6
Ex Gum	per oz.	0 6½	0 0	0 6½	0 0
Citric	"	1 6½	0 0	1 7½	0 0
Gallic	"	3 2	3 6	3 2	3 6
Hydrochloric	per cwt.	4 6	7 6	4 6	7 6
Nitric	per lb.	0 3	0 34	0 3	0 34
Oxalic	"	0 5	0 0	0 5	0 0
Sulphuric	"	0 0½	0 1	0 0½	0 1
Salicylic	"	6 9	9 6	6 9	9 6
Tannic	"	1 4	2 9	1 4	2 9
Tartaric, English	"	1 7½	0 0	1 7½	0 0
foreign	"	1 6½	0 0	1 6½	0 0
ANTIMONY, crude	per cwt.	21 0	0 0	21 0	0 0
star	"	39 0	40 0	39 0	40 0
ARSENIC, lump	"	21 0	0 22	21 0	0 22
powder	"	12 0	0 0	12 0	0 0
BRIMSTONE, rough	"	8 0	0 8	8 0	0 8
roll	"	8 9	9 9	8 9	9 9
flour	"	10 0	12 6	10 0	12 6
GLYCERINE, German	"	47 6	0 0	50 0	0 0
refined	"	37 6	42 6	37 6	42 6
crude brown	"	17 0	0 0	17 0	0 0
IODIFORM	per lb.	0 8½	0 0	0 8½	0 0
IODINE, dry	per oz.	1 0	0 0	1 0	0 0
resublimed	"	0 10	1 4	0 10	1 4
MAGNESIA, calcined	per lb.	5 0	0 0	5 0	0 0
Hwds.	"	116 0	120 0	117 6	120 0
MERCURY	per bot.	2 11	0 0	2 11	0 0
PRECIPITATE, red	per lb.	2 9	0 0	2 9	0 0
white	"	1 8	2 0	1 8	2 0
PRUSSIAN BLUE	"	11 6	0 0	11 6	0 0
SANTONINE	"	10 0	0 0	10 0	0 0
SALICINE	"	35 0	0 0	35 0	0 0
THYMOL	"	115 0	0 0	115 0	0 0
SALTS—		125 0	0 0	125 0	0 0
Alum	per ton	0 5	0 0	0 5	0 0
powder	"	560 0	640 0	560 0	640 0
Ammonia:		230 0	240 0	230 0	240 0
Carbonate	per lb.	83 0	96 0	83 0	96 0
Hydrochlorate,	per ton	70 0	90 0	70 0	90 0
crude, white	"	38 0	42 0	38 0	42 0
Sulphate	per cwt.	7 6	0 0	7 6	0 0
Argol, Cape	"	38 0	40 0	35 0	37 0
Red	"	2 6	0 0	2 6	0 0
Oporto, red	per lb.	4 5	4 7	4 5	4 7
Bleaching powder	"	5 6	6 0	5 6	6 0
Borax, British refined	"	16 3	16 9	16 3	16 9
Calomel	per lb.	45 0	55 0	45 0	55 0
Chloral hydrate	"	2 0	0 0	2 0	0 0
Liebreich's	"	128 0	0 0	127 0	0 0
Copper:		109 0	0 0	109 0	0 0
Sulphate	per cwt.	3 6	4 0	3 6	4 0
Coppers, green	per ton	3 6	5 0	3 6	5 0
Corrosive Sublimate	per lb.	40 0	0 0	40 0	0 0
Cream Tartar, French	per cwt.	72 0	0 0	72 0	0 0
brown	"	4 6	5 0	4 6	5 0
Epsom Salts	"	2 3	2 4	2 3	2 4
Glauber Salts	"	0 3½	0 0	0 3½	0 0
Magnesia: Carbonate	"	29 0	0 0	29 0	0 0
Pond, Hwds.	per cwt.	46 0	46 6	46 0	46 6
Morphie Murias	per lb.	0 6½	0 0	0 6½	0 7½
Phosphorus	per lb.	0 9½	0 10	0 9½	0 10
Potash:		1 11	2 0	1 11	2 0
Bichromate	per cwt.	10 6	11 6	10 6	11 6
Carbocate:		1 8	0 0	1 8	0 0
Potashes, Canada,	per lb.	9 0	0 0	9 0	0 0
1st sort	"	11 6	12 0	11 6	12 0
Pearlshes, Canada,	per lb.	11 6	12 0	11 6	12 0
1st sort	"	3 4	0 0	3 6	0 0
Chlorate	per oz.	3 2	0 0	3 5	0 0
Prussiate	"	2 8	2 10	3 0	0 0
red	"	0 8	0 8½	0 8	0 8½
Sulphate	per cwt.	38 0	40 0	38 0	40 0
Potassium:		16 6	0 0	16 3	16 4½
Bromide	per lb.	1 8	0 0	1 8	0 0
Chloride	per cwt.	9 0	0 0	9 0	0 0
Iodide	per lb.	11 6	12 0	11 6	12 0
Quinine:		3 4	0 0	3 6	0 0
Sulphate, British, in	per oz.	3 2	0 0	3 5	0 0
bottles	"	2 8	2 10	3 0	0 0
Sulphate, French	"	0 8	0 8½	0 8	0 8½
Sulphate, German	per lb.	38 0	40 0	38 0	40 0
Sal Acetos	per cwt.	16 6	0 0	16 3	16 4½
Sal Ammoniac, British	"	16 6	0 0	16 3	16 4½
Saltpetre:		16 6	0 0	16 3	16 4½
Bengal, 6 per cent. or	"	16 6	0 0	16 3	16 4½
under	"	16 6	0 0	16 3	16 4½

## Saltpetre:—(cont.)

Bengal, over 6 per	per cwt.	16 3	to 0 0	Last Month	This Month
cent.	"	22 6	23 6	s. d. s. d.	s. d. s. d.
British, refined	"	7 6	7 9	0 0	0 0
Soda: Bicarbonate	"	45 0	0 0	22 6	23 6
Hwds.	"	45 0	0 0	7 6	7 9
Carbocate:	"	45 0	0 0	45 0	0 0
Soda Ash	per deg.	0 1½	0 0	0 1½	0 0
Soda Crystals	per cwt.	2 10½	0 0	2 10½	0 0
Caustic	"	8 9	9 0	8 3	8 9
Hyposulphite	"	8 0	8 6	8 0	8 6
Nitrate	"	10 3	10 9	10 3	10 9
Zinc Sulphate	"	12 0	14 0	12 0	14 0
SUGAR OF LEAD, White	"	30 0	34 0	30 0	34 0
Brown	"	26 6	0 0	26 6	0 0
VERDIGRIS	per lb.	0 9	0 10½	0 9	0 10½
VERMILION, English	"	2 0	0 0	2 0	0 0
China	"	2 2	0 0	2 2	0 0
DRUGS.		60 0	140 0	60 0	140 0
ALOES, Hepatic	per cwt.	80 0	160 0	90 0	170 0
Scotrine	"	31 0	37 6	32 6	40 0
Cape, good	"	25 0	30 0	27 0	31 0
Inferior	"	40 0	120 0	40 0	120 0
Barbados	"	30 0	80 0	30 0	80 0
Curacao	"	75 0	90 0	75 0	90 0
AMBERGRIS, grey	per oz.	75 0	90 0	75 0	90 0
BALSAM—		1 3	1 6	1 6	1 9
Canada	per lb.	1 6	1 7	1 6	1 7
Capivi	"	5 6	5 8	7 3	7 4
Peru	"	1 5	1 6	1 5	1 6
Tolu	"	27 6	30 0	27 6	30 0
Canella alba	per cwt.	28 0	35 0	28 0	35 0
Cascarilla	"	0 6	1 8	0 6	1 8
CINCHONA—		1 0	4 0	1 0	4 0
Peru, grey	per lb.	0 3	1 2	0 3	1 2
Calisaya, flat	"	0 6	1 2	0 6	1 2
quill	"	0 3	1 2	0 3	1 2
Carthageana	"	0 6	1 2	0 6	1 2
Columbian	"	0 3	1 0	0 3	1 0
Cuprea	"	0 6	1 10	0 6	1 10
New Granada	"	0 2	1 10	0 2	1 10
Pitayo & Maracaibo	"	1 6	6 0	1 6	6 0
Red	"	0 3	1 10	0 3	1 10
East India, crown	"	0 3	2 6	0 3	2 6
red	"	0 2	1 0	0 2	1 0
BUCHU LEAVES	"	85 0	0 0	85 0	0 0
CAMPHOR, China	per cwt.	85 0	0 0	85 0	0 0
Japan	"	1 14	0 0	1 14	0 0
Refin. Eng.	per lb.	1 14	1 3	1 14	1 3
Tablets	"	4 0	4 6	4 0	4 6
CANTHARIDES, China	"	5 6	6 0	5 6	6 0
Russian	"	40 0	42 0	68 0	70 0
CANOMILE FLOWERS	per cwt.	24 0	35 0	24 0	35 0
CASTOREUM	per lb.	0 3	0 0	0 3	0 0
CHIRETTA	"	70 0	240 0	70 0	240 0
ERGOT OF RYE	per cwt.	0 6½	0 10	0 6½	0 10
FRUITS & SEEDS (see also Seeds and Spices)		92 6	95 0	92 6	95 0
Anise, China Star	per cwt.	27 6	33 0	27 6	33 0
Russian	per lb.	2 0	4 0	2 0	4 0
Beans, Tonquin	"	3 6	4 6	3 6	4 6
Cardamoms, Malabar,	"	1 9	2 9	1 9	2 9
good	"	2 0	3 0	2 0	3 0
inferior	"	1 6	3 6	1 6	3 6
Aleppy	"	2 0	2 10	2 0	2 10
Madras	"	1 0	4 0	1 0	4 0
Ceylon	"	11 0	13 0	11 0	13 0
Malabar sorts	per cwt.	0 10	1 3	0 10	1 3
Cocculus Indicus	per lb.	240 0	280 0	220 0	270 0
Colocynth, apple	per cwt.	30 0	34 0	30 0	34 0
Cubeb	"	10 0	12 0	10 0	12 0
Cumin	"	0 0	0 0	0 0	0 0
Fennel	"	7 6	10 0	7 6	10 0
Juniper Berries	"	6 0	9 0	6 0	9 0
Nux Vomica	"	14 0	16 0	10 0	14 0
Tamarinds, E. India	"	17 0	20 0	17 0	20 0
W. India	"	5 0	12 0	5 0	12 0
Vanilla, large	per lb.	60 0	90 0	60 0	90 0
inferior	"	95 0	0 0	95 0	0 0
FLOWERS—Dalmatian	"	24 0	38 0	24 0	38 0
Caucasian	"	25 0	35 0	25 0	35 0
HONEY, Californian	per cwt.	2 10	4 0	2 10	4 0
Jamaica	per lb.	2 0	4 3	2 0	4 3
IPECACUANHA	"	1 6	4 10	1 6	4 10
ISINGLASS, Brazil	"	1 0	4 6	1 0	4 6
Tongue sort	"	2 9	3 10	2 9	3 10
East India	"	7 0	10 0	7 0	10 0
West India	"	2 2	2 4	2 2	2 4
Russ, leaf	"	0 7	0 9	0 7	0 9
Simovia	"	0 6	0 7	0 6	0 7
JALAP, good	"	0 0	0 0	0 0	0 0
infer. and stems	per deg.	1 6	0 0	2 4	2 11
LEMON JUICE	per gall.	55 0	100 0	55 0	100 0
LIME JUICE	per cwt.	12 0	20 0	12 0	20 0
LIQUORICE, Spanish	"	4 6	5 0	4 6	5 0
Liquorice Root	per lb.	75 0	87 6	75 0	87 6
MANNA, flaky	per oz.	50 0	90 0	50 0	90 0
MUSK, Tonquin pod.	"	30 0	40 0	30 0	40 0
Grain	"	1 3	1 5	1 3	1 5
Yunnan pod.	"	0 4	0 0	0 4	0 0
OILS (see also separate list)		0 3½	0 3½	0 3½	0 3½
Almond, expressed	per lb.	3 0	4 6	3 0	4 6
Castor, 1st pale	"	3 0	4 6	3 0	4 6
second	"	3 0	4 6	3 0	4 6
Cod-liver	per gall.	3 0	4 6	3 0	4 6



Is:—(cont.)		Last Month		This Month		Oils:—(cont.)		Last Month		This Month	
Essential Oils:		s. d.	s. d.	s. d.	s. d.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Almond	per lb.	25 0	to 0 0	25 0	to 0 0	SEAL, yellow to tinged..	per tun	23 0	to 24 10	23 0	to 24 10
Anise-seed, star	"	6 7	.. 6 9	6 7	.. 6 9	"    brown	"	22 0	.. 0 0	22 0	.. 0 0
"    German, &c.	"	8 0	.. 13 0	8 0	.. 13 0	SPERM	"	55 0	.. 56 0	53 0	.. 54 0
Bergamot	"	5 0	.. 5 6	5 0	.. 5 6	COD	"	38 0	.. 40 0	38 0	.. 40 0
Cajeput	per bot.	3 3	.. 0 0	3 3	.. 0 0	WHALE, South Sea, pale	"	23 0	.. 24 0	22 0	.. 22 10
Caraway	per lb.	7 6	.. 11 0	7 6	.. 11 0	"    yellow	"	22 0	.. 23 0	20 0	.. 23 0
Cassia	"	3 7	.. 3 8	3 7	.. 3 8	"    brown	"	20 0	.. 21 0	20 0	.. 21 0
Cinnamon	per oz.	2 0	.. 2 9	2 0	.. 2 9	Sardine	"	25 0	.. 27 0	25 0	.. 27 0
Cinnamon-leaf	"	0 2½	.. 0 0	0 2½	.. 0 0	OLIVE, Seville	per ton	36 0	.. 37 0	36 0	.. 38 10
Citronelle	"	0 1½	.. 0 1½	0 1½	.. 0 1½	"    Gioja	"	36 0	.. 37 0	36 0	.. 37 0
Clove	per lb.	3 0	.. 3 3	3 0	.. 3 3	"    Levant	"	35 0	.. 36 0	35 0	.. 36 0
Juniper	"	1 6	.. 2 0	1 6	.. 2 0	"    Mogador	"	35 10	.. 36 0	35 10	.. 36 0
Lavender, Exotic	"	6 9	.. 8 6	6 9	.. 8 6	"    Spanish	"	40 0	.. 40 10	38 0	.. 0 0
"    Mitcham	"	60 0	.. 0 0	60 0	.. 0 0	"    Sicily	"	38 0	.. 0 0	38 0	.. 0 0
Lemon	"	3 6	.. 5 6	3 6	.. 5 6	COCOANUT, Cochín	"	33 10	.. 0 0	32 0	.. 32 10
Lemongrass	per oz.	0 1	.. 0 1½	0 1½	.. 0 1½	"    Ceylon	"	27 0	.. 28 0	27 0	.. 28 0
Neroli	"	7 0	.. 0 0	7 0	.. 0 0	"    Mauritius	"	0 0	.. 0 0	0 0	.. 0 0
Nutmeg	"	0 8	.. 0 0	0 8	.. 0 0	PALM, fine	"	30 0	.. 0 0	30 0	.. 0 0
Orange	per lb.	8 0	.. 10 0	8 0	.. 10 0	LINSEED	"	22 0	.. 22 10	22 10	.. 23 5
Otto of Roses	per oz.	15 0	.. 30 0	12 6	.. 25 0	RAPESEED, English, pale	"	26 5	.. 26 10	25 10	.. 26 0
Patchouli	"	0 0	.. 0 0	0 0	.. 0 0	"    brown	"	24 5	.. 24 10	24 5	.. 24 10
Peppermint:						COTTONSEED	"	21 10	.. 23 0	22 15	.. 24 10
American	per lb.	12 0	.. 12 6	12 0	.. 12 6	LARD	"	26 0	.. 38 0	26 0	.. 38 0
(H. G. Hotchkiss)	"	18 0	.. 0 0	17 6	.. 0 0	TALLOW	"	28 10	.. 45 0	28 10	.. 45 0
English	"	26 0	.. 28 0	27 0	.. 29 0			s. d.	s. d.	s. d.	s. d.
German	"	8 0	.. 12 0	8 0	.. 12 0	TURPENTINE, American	per cwt.	30 0	.. 32 0	27 6	.. 27 9
Japan	"	12 0	.. 15 6	12 0	.. 15 6	PETROLEUM, refined	per gall.	0 6½	.. 0 6½	0 6½	.. 0 6½
Menthol crystals	"	23 0	.. 35 0	23 0	.. 35 0	"    Spirit	"	0 7	.. 0 7½	0 7	.. 0 7½
Rosemary	"	2 6	.. 3 9	2 6	.. 3 9	SEEDS.					
Sassafras	"	2 6	.. 0 0	2 6	.. 0 0	CANARY	per qr.	48 0	.. 60 0	44 0	.. 62 0
Spear-mint	"	12 0	.. 14 0	12 0	.. 14 0	CARAWAY, English	per cwt.	0 0	.. 0 0	0 0	.. 0 0
Thyme	"	2 6	.. 0 0	2 6	.. 0 0	"    German, &c.	"	37 0	.. 50 0	37 0	.. 50 0
Mace, expressed	per oz.	0 2	.. 0 0	0 2	.. 0 0	CORIANDEE	"	14 0	.. 23 0	14 0	.. 23 0
OPUM, Turkey	per lb.	15 0	.. 17 0	15 0	.. 17 0	HEMP	per qr.	38 0	.. 0 0	38 0	.. 0 0
"    inferior	"	11 0	.. 13 0	11 0	.. 13 0	LINSEED, English	"	42 6	.. 0 0	42 6	.. 0 0
QUASSIA (bitter wood)	per ton	80 0	.. 110 0	110 0	.. 120 0	"    Black Sea & Azof	"	40 0	.. 0 0	40 0	.. 0 0
RHUBARB, China, good						"    Calcutta	"	42 0	.. 0 0	42 0	.. 0 0
and fine	per lb.	2 3	.. 3 9	2 3	.. 3 9	"    Bombay	"	42 0	.. 0 0	42 0	.. 0 0
Middling to fair	"	1 3	.. 2 0	1 3	.. 2 0	"    St. Petersburg	"	35 0	.. 38 0	35 0	.. 38 0
ROOTS—Calumba	per cwt.	25 0	.. 40 0	25 0	.. 40 0	MUSTARD, brown	per bush.	10 0	.. 12 0	10 0	.. 12 0
China	"	22 0	.. 27 0	22 0	.. 27 0	"    white	"	7 6	.. 9 6	7 6	.. 9 6
Cus-Cus	"	0 0	.. 0 0	0 0	.. 0 0	POPPY, East India	per qr.	37 6	.. 0 0	37 6	.. 0 0
Galangal	"	15 0	.. 18 0	15 0	.. 18 0	SPICES.					
Gentian	"	20 0	.. 24 0	20 0	.. 24 0	CASSIA LIGNEA	per cwt.	30 0	.. 31 0	28 6	.. 0 0
Orris	"	23 0	.. 50 0	23 0	.. 50 0	"    Vera	"	18 0	.. 23 0	18 0	.. 23 0
Pellitory	"	68 0	.. 80 0	68 0	.. 80 0	"    Buds.	"	34 0	.. 0 0	41 0	.. 41 6
Pink	per lb.	1 6	.. 0 0	1 6	.. 0 0	CINNAMON, Ceylon:					
Rhatany	"	0 5	.. 0 6	0 5	.. 0 6	"    1st quality	per lb.	0 9	.. 2 1	0 8½	.. 1 9
Seneka	"	2 4	.. 2 6	2 4	.. 2 6	"    2nd ditto	"	0 6	.. 1 9	0 6	.. 1 7
Snake	"	1 6	.. 0 0	1 6	.. 0 0	"    3rd ditto	"	0 5	.. 1 2	0 5	.. 1 2
SAFFRON, Valencia	"	27 6	.. 35 0	30 0	.. 37 6	"    Tellicherry	"	0 0	.. 0 0	0 0	.. 0 0
Alicante	"	20 0	.. 25 0	20 0	.. 25 0	"    Chips	"	0 2½	.. 0 5	0 2½	.. 0 5
SARSAPARILLA, Lima	"	0 6	.. 0 9	0 6	.. 0 9	CLOVES, Penang	"	0 11	.. 1 2	0 11	.. 1 2
Guayaquil	"	1 2	.. 1 5	1 2	.. 1 5	"    Amboyana	"	0 8	.. 0 9½	0 8	.. 0 9½
Honduras	"	1 2	.. 1 6	1 2	.. 1 6	"    Zanzibar	"	0 4½	.. 0 5	0 4½	.. 0 5½
Jamaica	"	1 6	.. 1 10	1 6	.. 1 10	GINGER, Jam., fine	per cwt.	75 0	.. 200 0	70 0	.. 200 0
SASSAFRAS	per cwt.	0 0	.. 0 0	0 0	.. 0 0	"    Ord. to good	"	47 6	.. 70 0	45 0	.. 65 0
SCAMMONY, Virgin	per lb.	28 0	.. 32 0	28 0	.. 32 0	African	"	30 0	.. 35 0	30 0	.. 35 0
second and ordinary	"	10 0	.. 24 6	10 0	.. 24 6	Bengal	"	30 0	.. 35 0	30 0	.. 35 0
SENA, Bombay	"	0 2½	.. 0 0	0 2½	.. 0 0	Malabar	"	0 0	.. 0 0	0 0	.. 0 0
Tinnivelly	"	0 3	.. 1 2	0 3	.. 1 2	Cochin	"	40 0	.. 107 0	35 0	.. 100 0
Alexandria	"	0 9	.. 1 6	0 9	.. 1 6	PEPPER, Black, Malabar	per lb.	0 7½	.. 0 8	0 7½	.. 0 8
SERMACETI, refined	"	1 3	.. 0 0	1 3	.. 0 0	"    Singapore	"	0 7	.. 0 7½	0 7	.. 0 7½
American	"	0 10½	.. 0 0	0 10½	.. 0 0	"    White	"	0 9½	.. 0 10½	0 9½	.. 0 10½
SQUILLS	"	0 1	.. 0 2½	0 1	.. 0 2½	"    Cayenne	"	1 2	.. 1 6	1 2	.. 1 6
"    "    "    "	"	2 5	.. 2 10	2 5	.. 2 10	MACE, 1st quality	"	1 4	.. 2 0	1 4	.. 2 0
AMMONIAC, drop	per cwt.	15 0	.. 17 0	15 0	.. 17 0	"    2nd and inferior	"	1 1	.. 1 2	1 1	.. 1 2
ANMI, fine washed	"	12 0	.. 15 0	12 0	.. 15 0	NUTMEGS, 78 to 60 to lb.	"	2 6	.. 3 5	2 6	.. 3 5
"    "    "    "	"	2 15	.. 3 10	2 15	.. 3 10	"    90 80	"	2 3	.. 2 5	2 3	.. 2 5
ARABIC, pale picked	"	1 10	.. 2 6	1 10	.. 2 6	"    132 95	"	1 7	.. 2 3	1 7	.. 2 3
"    "    "    "	"	8 10	.. 10 0	8 10	.. 10 0	PIMENTA	"	0 2	.. 0 2½	0 2	.. 0 2½
TURKEY, pick. gd. to fin.	"	7 0	.. 8 10	7 0	.. 8 10						
"    "    "    "	"	5 5	.. 5 15	5 5	.. 5 15	VARIOUS PRODUCTS.					
"    "    "    "	"	1 10	.. 3 0	1 10	.. 3 0	COCHINEAL—					
ASAFOETIDA, cm. to fin.	"	14 0	.. 32 0	14 0	.. 32 0	"    Honduras, black	per lb.	1 6	.. 1 9	1 6	.. 1 9
BENJAMIN, Siam, 1st	"	5 0	.. 10 0	5 0	.. 10 0	"    "    silver	"	1 3	.. 1 6	1 3	.. 1 6
"    "    "    "	"	5 0	.. 10 0	5 0	.. 10 0	"    Mexican, black	"	1 4	.. 1 9	1 4	.. 1 9
Sumatra	"	s. d.	s. d.	s. d.	s. d.	"    "    silver	"	1 2	.. 1 4	1 2	.. 1 4
COPAL, Manila	"	15 0	.. 75 0	15 0	.. 75 0	"    Teneriffe, black	"	1 6	.. 2 0	1 6	.. 2 0
"    Angola, red	"	145 0	.. 152 6	145 0	.. 152 6	"    "    silver	"	1 3	.. 1 5	1 3	.. 1 5
"    DAMAR, pale	"	75 0	.. 87 6	75 0	.. 87 6	GALLS, Tky blue	"	50 0	.. 52 0	50 0	.. 52 0
EUPHORBUM	"	10 0	.. 15 0	10 0	.. 15 0	"    "    China	"	40 0	.. 47 6	40 0	.. 47 6
GALBANUM	per lb.	0 3	.. 0 10	0 3	.. 0 10	INDIGO, Bengal	"	1 9	.. 6 7	1 9	.. 6 7
GAMBOGE, picked pipe	per cwt.	230 0	.. 250 0	240 0	.. 280 0	"    "    Madras	"	0 5	.. 3 4	0 5	.. 3 4
GUALACUM	per lb.	0 6	.. 2 1	0 6	.. 2 1	"    "    Kurrpah	"	0 10	.. 4 9	0 10	.. 4 9
KINO	per cwt.	28 0	.. 30 0	28 0	.. 30 0	"    "    Oude	"	1 0	.. 5 0	1 0	.. 5 0
KOWRIE, sorts	"	30 0	.. 50 0	30 0	.. 50 0	"    "    Guatemala	"	1 3	.. 5 8	1 3	.. 5 8
"    "    "    "	"	110 0	.. 200 0	110 0	.. 200 0	ROSIN, American	per cwt.	3 9	.. 10 0	4 3	.. 10 0
MASTIC, picked	per lb.	2 9	.. 3 3	2 9	.. 3 3	SOAP, Castile	"	28 0	.. 0 0	28 0	.. 0 0
MYRRH, good and fine	per cwt.	100 0	.. 150 0	100 0	.. 150 0	SOY, China	per gall.	1 7	.. 0 0	1 7	.. 0 0
"    "    "    "	"	80 0	.. 140 0	80 0	.. 140 0	WAX, BEES, English	per cwt.	£0 0	.. £0 0	£0 0	.. £0 0
OLIBANUM, p. drop	"	39 0	.. 45 0	39 0	.. 45 0	"    "    Jamaica	"	6 15	.. 7 10	6 10	.. 7 7/6
"    "    "    "	"	29 0	.. 37 0	29 0	.. 37 0	"    "    East India	"	6 0	.. 7/12/6	5 5	.. 7 0
SENEGAL	"	40 0	.. 45 0	40 0	.. 45 0	VEGETABLE, Japan	"	£3 15	.. £4 0	£3 15	.. £4 0
SANDARAC	"	60 0	.. 105 0	60 0	.. 105 0	Paraffin	per lb.	0 4	.. 0 6	0 4	.. 0 5
SHELLAC, Orange	"	64 0	.. 85 0	64 0	.. 85 0	WOOD, DYE, Bar	per ton	£3 5	.. 3 10	£3 5	.. 3 10
"    "    "    "	"	58 0	.. 63 0	58 0	.. 63 0	"    Brazil	"	7 0	.. 18 0	7 0	.. 18 0
THUS	"	25 0	.. 0 0	25 0	.. 0 0	"    Cam	"	16 0	.. 30 0	16 0	.. 30 0
TRAGACANTH, leaf	"	140 0	.. 280 0	140 0	.. 280 0	"    Fustic, Cuba	"	4 0	.. 6 0	4 0	.. 6 0
"    "    "    "	"	20 0	.. 180 0	20 0	.. 180 0	"    "    Jamaica	"	4 5	.. 5 15	4 5	.. 5 15
						LOGWOOD, Campeachy	"	7 10	.. 8 5	7 10	.. 8 5
						"    "    Jamaica	"	5 0	.. 5 10	5 0	.. 5 10
						LIMA, first pile	"	8 5	.. 8 10	8 5	.. 8 10
						RED SANDARS	"	5/17/6	.. 6 0	5/17/6	.. 6 9
OILS.											
SEAL pale	per tun	£ s.	£ s.	£ s.	£ s.						
		26 0	.. 27 0	26 0	.. 27 0						





### Australian Pharmacy.

*To the Chemist and Druggist—*

SIR,—I beg to draw attention to a statement made by your Melbourne correspondent in the April number of your Journal.

[The Victorian Board refuse to accept the certificates of the New South Wales Society because there is no uniform system of education exacted from pharmaceutical candidates in the two colonies. Neither New South Wales nor New Zealand has an apprenticeship or educational examination.

In contradiction I send you an extract from the laws of the Pharmaceutical Society of New South Wales passed in 1876:—

"After January 1, 1877, no apprentice shall be entitled to the privileges of an Associate without having *before* the execution of his indentures passed an examination in classical education."

It will therefore be plainly seen that *both* apprenticeship and an educational examination are required by the Pharmaceutical Society of New South Wales.

Your correspondent forgot to state that the Victorian Board has *not* the power under their present Pharmacy Act to recognise the New South Wales certificate, and should they desire the power I am doubtful about the Board obtaining it from the Victorian Parliament.

Sydney, N.S.W.

Yours truly,

June 20.

J. M.

### Limited Companies and Pharmacy.

*To the Chemist and Druggist—*

SIR,—*Re* Eastover Stores Association (Limited); capital 1,000*l.*, in 1*l.* shares; Manager, William Bouchier (unqualified). Two brothers and one sister of said William Bouchier interested in the company to the extent of 1*l.* each; two private friends ditto, 1*l.* each; two private friends ditto, 5*l.* each.

From the above, which was published in the July number of THE CHEMIST AND DRUGGIST, no one need despair of being able to carry on the business of a chemist and druggist, no matter whether he pass the required examinations, and give the necessary proofs of qualification, or not.

Good news for outsiders longing to get in the trade without trouble and expense! Premium on artful scheming, and bold contempt for the Pharmaceutical Society and all the Pharmacy Acts! Only get brothers and sisters to join with a private friend or two in forming a limited company, and the thing is done at the expense of about 20*l.*!

Who would pay fees, and undergo the undignified ordeal of examination, when, forsooth, the same privileges are attainable without? Truly laws were made for slaves.

An uncertificated owner of a ship is not allowed to command at sea by law, but, in the responsible calling of a chemist, any ruse can apparently be adopted; and persons who cannot qualify, and enter the business in the orthodox manner, have only to get their sisters and brothers and cousins to join them in forming a company, and in this way crawl in at the back door to the business.

This is an exceedingly hopeful anticipation; and as prescriptive rights will probably be respected in future legislation on the subject, pharmacy may be certainly classified as retrograde.

Yours obediently,

ROSIN.

### "Cutting" Prices.

*To The Chemist and Druggist—*

SIR,—I am rather amused at the so-called "cutting" prices of Mr. Thomas, which appear to so much disturb your correspondents. So far as you quote these prices they are considerably higher than have been current with nearly all chemists in this district so long as I can remember. If Mr. Thomas's prices do not please his neighbours, I should like to know what sort of prices they would wish for. A buyer possessed of any knowledge or capital can purchase any of

the articles quoted so as to sell at the "cutting" prices, maintain his position, and make an excellent profit.

The age for "fancy" prices has departed. Let sensible men supply good and reliable articles at fair and reasonable prices and they need not fear—at least till something more formidable than Mr. Thomas's list confronts them.

Yours, &c.,

August 12.

AN ULSTER CHEMIST.

Another correspondent writes:—

I hope you will not allow the opinion of "Yours Indignantly" and Mr. Eastman (in reference to your interview with Mr. Thomas) to weigh for the trade in general. The sooner those advocates of a sinking system, which is passing away for ever, take up the gauntlet thrown down by their brothers in trade the better for themselves. Neither will they work themselves nor let Mr. Thomas work. They despise a man who has the moral courage to say "No" to an overwhelming enemy; they want to stand still when "march on" is the order of the day. Stand, if you will, but do not try to persuade us it is philanthropy; nay, rather call a spade a spade.

August 11.

YOURS GRATEFULLY.

This letter is not intended for publication, but rather to show you there are many who think you did them a signal service in interviewing Mr. Thomas and publishing the interview.

[We have received other letters expressing interest in the report for which we were last month severely criticised.]

### The New Pharmacopœia.

16/42. W. T. F. suggests that an edition of the Pharmacopœia with blank interleaves would be much appreciated.

45/68. A. P.—Ivory-dust is well known as a material for making jellies, and is a Sheffield delicacy. The dust is obtained in the process of making knife-handles, and the jelly is given in cases of consumption and debility. Any Sheffield druggist, and probably any wholesale druggist would be able to supply the dust.

45/56. J. A. C.—Glycerol is a name for the class of pharmaceutical preparations of which glycerine is the base, as glycerol of lead, of bismuth, &c. They are also called "glycerines," "glycerites," or "glyceroles."

### Willow Boxes.

*To the Chemist and Druggist—*

SIR,—The willow boxes now supplied by sundrymen are inferior beyond comparison to those of twenty years ago, for the simple reason that then we had British, now German or Norwegian. I have been using home-made boxes for some time; the difference is surprising. The German are thin, sides rough and wavy, the insides, and sometimes outsides, of lids and bottoms cross-grained and splintered, large pieces adhering to the contents when the top is removed, badly put together, only half-glued, at once giving way to a stiff ointment, with neither shape nor make nor anything else to recommend them.

The English made are twice as thick in substance, perfectly smooth inside and outside, and well polished; the flats are cut with the grain, quite free from splints, well and strongly made, holding water better than the German hold honey. The lids are a perfect fit, and altogether they are much superior and more sightly. As a commercial matter its importance is small, but I see no reason why we should encourage foreign industry when we can be so much better served by our own, and as cheaply. The maker delivers me any quantity free at Maw's prices. It is not a matter of 1*d.* or 2*d.* a gross on willows that the ordinary consumer would consider so much as their quality. The maker referred to has told me he formerly supplied a London house with 1,500 gross weekly. When the foreigners obtained the contract he had to discharge twenty-five girls. These girls receive 2*d.* a gross for putting the shavings together; in Germany they get 1/4*d.* Someone gets the extra profit, not the retail druggist, though he has to put



with the wretched workmanship. A protest from those who, like myself, prefer good boxes might lead to our obtaining better value for money, or at least giving us the option of having English make.

Yours, &c.,  
SALIX.

### The New By-laws.

To the Chemist and Druggist—

SIR,—In a letter to your last month's journal Mr. Martindale says, "Mr. Symes at the meeting assumed that I was the only man in the room who objected to the mode of division suggested by the Council, i.e., of having the dispensing manipulation, I would term it) in the second part of the examination (I would have it in the first). He must have known that several of his colleagues on the Council, and many besides, agreed with me."

I was perfectly aware that three or four of my colleagues in the Council did not view the division of the examination in the same light as the majority; but that is a very different thing from knowing that they agreed with Mr. Martindale. I have heard a considerable amount of discussion and read much correspondence on this subject, and, as far as my memory serves me, the peculiar view held by Mr. Martindale in its entirety is endorsed by him alone.

Faithfully yours,  
CHARLES SYMES.

Liverpool, August 3.

### "Chemists' Taxes."

To the Chemist and Druggist—

SIR,—As a supplement to the letter addressed by Mr. R. O. Fitch to the Chancellor of the Exchequer, I have this day forwarded to the House of Commons (through an M.P.) a few more suggestions. (Copy herewith.)

Yours faithfully,  
J. J. JACKSON.

Hereford, August 7.

"*Patent Medicine Duty*."—This is a heavy tax of 15 to 20 per cent. on the gross return of the manufacturer of a patent medicine. Spirit enters in the composition of most medicines on which he pays duty. Finally, he pays income-tax on profits. It is a tax unfairly levied upon a particular class. For instance, if a chemist claims a right to the manufacture of a medicine for the relief of any ailment, and calls it, say, 'Brown's Cough Mixture,' he is liable to duty, while thousands of articles manufactured by other traders, and sold under the same conditions (not medicines) are exempt. Among allied trades may be mentioned such things as 'Pear's Soap,' and other luxuries, which go 'scot free.' If the patent medicine tax is a just one and is to be retained, then it should be borne by all proprietors alike. More especially should the stamp duty be placed upon foreign imported mineral waters, which enjoy all the privileges of English patent medicines, are advertised as cures for every ill, and yield enormous profits to the proprietors of German springs, who pay nothing towards English taxation.

"Under the head of mineral waters, or salts for their production, proprietors of such preparations as 'Euo's Fruit Salt' escape duty, which is as unfair as it is absurd, considering they are advertised as specific against disease in every form. Foreign patent medicines come into this country free (but pay our stamp duty), while the American market is practically closed to English manufactures by duties placed upon them. (I think a 2s. 9d. article costs over 4s. in America.)

"The new patent medicine stamp in process of printing should be perforated and gummed. It would save a great amount of trouble to users of the same. A glance through the advertising columns of newspapers would give instances of hundreds of patents which might just as fairly be taxed as medicines, which are largely used by the poorer classes, and seldom bought but in cases of necessity, and perhaps at a time when they can least afford it."

20/41, R. B., and 5/43, R. H.—*Trade Titles*.—It is impossible to say definitely whether any particular label infringes the rights of some other proprietor. We might give you our opinion that it did not, but the other proprietor

might for all that commence an action, and might gain it. Last month (page 404) we published the opinion of an excellent legal authority bearing on this point. We would ask you to read that carefully. If, in addition, you would look over our summary of cases respecting titles, published in January, February, and March of last year, you would at least perceive how utterly absent are all bases for forecasting the decision of a court. The only general principle that can be laid down is that, while A has no right to monopolise ordinary words or combinations of words, Z has no right to take to himself the benefit of any trade which A has legitimately created.

39/44. *Semper Vivens*.—*Medicine Stamps*.—Your pills are certainly liable to stamp-duty on two grounds. You claim a property in them, and you recommend them for certain diseases of the human frame.

33/42. *G. F. M.*—The corn cure would be liable with the wording you adopt, and strictly the glycerine jelly would be liable also, because you recommend it as an application for the prevention, cure, or relief of a complaint incident to the human body. Certainly you can sell either preparation without registering them; indeed, there is not much probability that you will be allowed to register the titles as trade-marks.

44/62. *W. D.* asks whether chlorodyne can be sold without a patent-medicine stamp if labelled merely with the name, and without bearing any proprietary name or recommendation for specific complaints. The question is a novel one, and we cannot tell how the Board of Inland Revenue would decide it. It might be considered that as "chlorodyne" is advertised in various ways for the relief of certain complaints, any person employing the title was to that extent appropriating to himself the benefit of those advertisements. And this, we think, would be the fair way of regarding it. It would be legal, however, to adopt another title, and sell it in the way suggested without a stamp. The only way to be certain would be to put up a bottle labelled as proposed, and submit it to the Board.

### Apprentices.

An apprentice I am acquainted with is fond of breaking 3s. 6d. bottles, spilling contents, smashing windows, &c. Can he or his father be compelled to pay, nothing to that effect being stated on the indentures?—J. F. B.

The law will not assist the master in such a case. The terms arranged between him and the apprentice are expressed in the indenture, and cannot afterwards be varied or added to, except by mutual consent in writing, to which the parent or guardian would have to be a party, and if any arrangement were to be made for payment, the parent or guardian would have to be the responsible person; such a contract on the part of the infant would not be enforceable standing alone. In one case, an apprentice was cured of the habit by the simple expedient of keeping an account of the value of all the breakages made by his master, the assistant, and himself, respectively; but this might not be effectual in all cases; much depends upon individual temperament. A covenant by the father in the indenture would have been enforceable against him.

43/68. *Nemo*.—We cannot form any opinion as to the difficulty between you and your apprentice without knowing what contract there is between you.

### Legal Queries.

9/44. *Tie Mixture*.—Under the law as it now stands any person, whether registered or not, may make or deal in patent medicines, even though they contain poisons. If such medicines, however, are preparations of any of the scheduled poisons, the regulations respecting labelling and selling them ought to be observed. We are aware that this requirement of the law is systematically disregarded by many patent medicine proprietors, but it is the law all the same.



## Pharmaceutical Slavery.

To the Chemist and Druggist—

SIR,—May I take advantage of your customary courtesy to ventilate a grievance which, in my humble opinion, is more widely felt than even the absence of that fearful and wonderful *protégé* of the Pharmaceutical Council—the curriculum. I refer to the hours which obtain in modern pharmacies.

In London the following hours are the rule and not the exception:—8 A.M. till 10 P.M., half a day on Sundays, and one evening per week off at 6 P.M. The exceptions to these hours include some even longer, as well as some a little shorter.

Perhaps, sir, you may say that it is no work and not too much work that deserves sympathy, but it is not the amount of work to which we object, but the unnecessarily long hours over which it is extended. "The glow of labour" may be "a purifying fire in which all poison is burnt up," but I think that even Carlyle would have admitted that fourteen or fifteen hours' close daily confinement would have savoured of too much "glowing."

I love to hear the Pharmaceutical Councillor as he takes his airy flights into the future and speculates on the position which pharmacy is to hold in it. I wax enthusiastic as his celestial-tipped diction pierces the empyrean, and grow enraptured at his glowing picture of the chemist some three or four centuries hence. But when the effervescence of feeling produced by his oratory has subsided, I grow matter-of-fact, and wonder if it would not be better to endeavour to benefit the present generation as a preparation for the glorious beneficence that is to shine on future ones.

It must surely be apparent that if the chemist, as the professor of an intellectual calling, is to keep pace with the scientific strides of the times, it is necessary that he should have some time for mental culture, if not for bodily recreation. But the only places of instruction open to the public after 10 P.M. are those places in which the Pierian spring is kept in a cask and retailed in tankards at twopence the half-pint.

I am Vandal enough to wish for an amelioration of our condition, while I would be last in the world to deny the principals the right to "wallop their own niggers." But principals are proverbial for their courtesy to their assistants, and I think that the matter has only to be properly and respectfully placed before them in order to have them hand-in-glove with us. Mr. Jones simply works his assistant till 10 P.M. because Mr. Brown does so, and Mr. Robinson does it for a similar reason. Now, if Messrs. Jones, Brown, and Robinson were to close their premises, say at 9 o'clock, nobody would be a loser, and principals would benefit as greatly from the shorter hours as the assistant. Many chemists at present complain of the lack of energy in their assistants, and this may certainly be attributable to the truism about "all work and no play." When the assistant works till 10 o'clock at night, or later, and is also liable to be called up at any time during the night, he is not likely to throw next morning that freshness and energy into his work which otherwise his employer might justly look for.

While the clerk, the draper, or the mechanic can take advantage of those numerous evening classes for the acquirement of knowledge, the only resort open to the chemist's assistant is the public-house or billiard-saloon. And yet we hear about a curriculum and the elevation of Pharmacy (with a big P). By all means let us elevate pharmacy, but we want more than platform filibustering.

The state of things to which I draw attention can have only one effect on the assistant, namely, to enervate the mind and destroy the fire and enterprise of youth. And, as the assistant of to-day is the principal of the future, we do not require algebraic equations to demonstrate its effect on the future of pharmacy.

As our only means of representation is through the columns of your journal, I trust these few remarks will be the means of drawing more than a passing attention to what, in deep seriousness, and without any flippancy, I term "Pharmaceutical Slavery."

Yours respectfully,

W. G. B.

## Horse Oils.

J. F. B. writes:—I was unfortunate enough to *mis-make* a batch of horse oils the other day, nearly a gallon of stuff that separates, and shows the oil-clots, &c. It looks about as little like an emulsion as any you can imagine. Would you be able to suggest anything that would make it saleable through the much-prized columns of THE CHEMIST AND DRUGGIST?

When an emulsion has once separated it is almost mechanically impossible to restore it to the desired condition. Nevertheless we have seen a certain plan tried with success. The spoilt emulsion was poured into a tall, narrow cylindrical vessel, and, by standing, the uncombined and supernatant oil was allowed to accumulate. This was drawn off by means of a syringe and converted into an emulsion, and added subsequently to the remainder. A decent preparation was thus made.

38/72. I. W. J.—The best information we have about depilatories is published on page 332 of our June number. **Adder Ointment** is really the fat of adders. It is commonly prepared by gamekeepers, by cutting up adders into pieces, like eels, and warming in a fryingpan till the fat runs out, when it is poured into a pot and cooled. So late as 1750, and perhaps later, directions for making "Axungia viperinæ" were included in the London Pharmacopœia, and practical notes on it are given in the "New Dispensatory," A.D. 1753.

## Wine of Coca for Greyhounds.

To the Chemist and Druggist—

SIR,—Seeing an account in one of the issues of THE CHEMIST AND DRUGGIST of the reviving effects of wine of coca when administered to athletes and pedestrians, could you or any of your correspondents say if it would have the same good effect to greyhounds if given before the commencement of a course? If so, what would be the proper quantity to give.

Fenton, Staffs., August 1.

Yours truly,  
G. HULME. (42/60.)

To this our Veterinary Correspondent replies:—"Coca is of no use with greyhounds, and condition or proper training is everything. Of course they cannot run or sustain prolonged exertion if fed before a race, but *water is the best restorative.*"

To this we would add that the case we have previously published (June number, p. 336) was one in which a young female pedestrian had been thoroughly prostrated by over-exertion before the wine of coca was administered. The great apparent effect produced was enhanced by her previous feebleness. It by no means follows that the administration of the drug before the exertion would have produced as great an apparent effect. If our correspondent tries the experiment we should be glad to know the result. The answer to Fritz, on page 408 of our July number, will give some hint as to the doses to be tried. The weight of the dog compared with the weight of the average woman would probably give the proportion to be observed.

Mr. E. Spencer, Lenox, Massachusetts, asks:—"Will you kindly inform me through your journal what woon stone (?) is? A coachman inquired for it, and said that he could get it in England, but has not been able to find it in this country. I cannot find such a word in any book that I have access to."

Woon stone is doubtless wound stone (*Lapis vulnerarius*), which, our books of reference tell us, is almost identical with *Lapis divinus*, or *L. ophthalmicus*. Below we give three formulæ:—

1. Verdigris, nitre, and alum, equal parts, melted together.  
2. Alum, nitre, and blue vitriol, of each 3 oz.; camphor, 1 drachm; melted together.

3. Blue vitriol, nitre, alum, and camphor, melted together, adding the camphor last. Astringent and detergent. One oz. dissolved in a pint of water formed a once-celebrated lotion. One drachm in a pint of water is still used as a collyrium.—*Cooley.*

5/116. T. M. K. wants a recipe for **Dog Biscuits** equal to Spratts' and for **Harness Composition** equal to Propert's. Propert's harness composition always remains soft. Our correspondent has tried several recipes, which have all failed. It



ist be understood that we can but very rarely give formulae match particular patterns, but we shall be glad to hear from any correspondent who can favour us.

26/44. *R. L.*—There is a useful 1s. primer on the eye and sight generally, published by David Bogue, which will give the information you require.

42/44. *A. D.*—Wheat-dressings.—We cannot say what is the composition of the particular dressing you name, but we understand that most of those in the market are composed of impure sulphate of copper. There is nothing much better (lb. to the sack of wheat). Quicklime (5 lb. to the sack) arsenic (3 oz. to the sack) is also used.

3/44. *H.*—Fly-catchers.—We do not know what myocoma-gum is made from, but birdlime makes a good substitute. It was mentioned in our number for October last (p. 486).

### Antidote to Strychnine.

*the Chemist and Druggist*—

SIR,—The recent sad death of a country chemist from strychnine [see report in last number under Canterbury, page 356], and the statement made by a weekly newspaper that "no antidote was given him, the deceased being past it," induces me to relate my experience regarding the particular alkaloid mentioned, and the means by which I have successfully avoided any fatal results to my patients—patients who have always been quadrupedal ones—cats and dogs. Whether the higher animal, man, would be equally amenable to the same treatment I of course cannot foretell, but I think, as no sure means of counteracting the effects of strychnine appears to be extant, the treatment successful with animals is at least worthy of trial on human beings, and that treatment is simply the exhibition of very large doses of chloral hydrate repeated at every symptom ofurring spasm. Small doses are useless. I have had some eight or ten cases in the last four or five years, and have not lost one.

To illustrate the large doses I advocate, I quote one case, which, I think, was that in which I had to give the largest quantity. A small bull terrier swallowed the whole of a 6d. packet of Battle's killer, and was brought in to me in almost the last stage of strychnine-poisoning. I administered directly between 2 and 3 drachms of chloral hydrate, and gave a saturated solution of the salt to the customer, with directions to give a teaspoonful on the recurrence of the first sign of twitching. I myself gave another dose of 2 drachms after business hours, and altogether the dog took nearly 3 oz. of chloral in the course of thirty-six hours, and completely recovered.

It appears to me that no injurious effects follow the exhibition of chloral when even a small quantity of strychnine has previously been taken, and a few months ago I tested this idea in the case of a large hound, which had swallowed recently, by the slowness of the twitching, but very little, and to which I gave 80 grains of chloral, and repeated the dose in a couple of hours, without the animal showing any signs of chloral-poisoning, and with complete suspension of strychnine symptoms.

This suggests whether the reverse process would be equally efficacious, and strychnine prove an antidote to chloral.

Yours, &c.,

FRANK W. TRUMAN.

July 17.  
[See a note on this subject under "Scientific Notes" this month.]

### Gloves for Swimmers.

*the Chemist and Druggist*—

SIR,—The time for the holidays is fast approaching, and I am looking forward to them as perhaps only a man can who has spent twelve months in the smoke and dust and din of Birmingham, together with the weary hours of business incidental to our calling. One of the greatest pleasures of the holiday is the swimming. I can enjoy half an hour in the sea; but of late years I am troubled with numbness of the fingers, so much so, particularly if the morning is cool and

cloudy, as to be troublesome, and I am then compelled to swim with the hands clenched; and sometimes after leaving the water the fingers are so numb that I can only dress with difficulty. I am not cold or cramped or numb anywhere but the fingers, and the object of this letter is to ask you if you can tell me if there are such things as gloves to protect the hands when swimming, something in the same way in which the dress worn by Captain Boyton protected him from cold as well as supported him in the water.

Gloves which would protect the hands from cold would render the swimming and the dressing afterwards much pleasanter; and I have for some years intended writing to you on this subject, thinking and hoping you would consider it of sufficient interest to give it a place in THE CHEMIST AND DRUGGIST.

Trusting you will assist me in this matter, if possible,

I remain, sir, yours very truly,

BATHER. (45/27.)

[Suggestions on this subject will be welcome.—Ed. C. & D.]

**Washing Liquids.**—Below we give various formulae for washing liquor:—

#### I.

Carbonate of soda, dissolved in water, and made caustic by shaking with slaked lime.

#### II.

Alcohol .. .. .	1 pint
Spirits of turpentine .. .. .	1 pint
Strongest solution of ammonia .. .. .	2 oz.

Mix. Put three or four tablespoonfuls to 1 pint of soft soap, or 1 lb. of hard soap. The clothes should be soaked overnight if possible before using this mixture, but if soaked an hour or two it will aid much.

#### III.

Washing fluid for fine linen, laces, &c.:—

Borax .. .. .	4 oz.
Water .. .. .	5 galls.

For crinoline or any stiff fabric increase the quantity of borax to 6 oz.

#### IV.

Nottingham washing liquor:—

Water .. .. .	1 gall.
White soap .. .. .	3 oz.
Pearl ash .. .. .	3 dr.

#### V.

Hull washing liquor:—

Yellow soap .. .. .	1½ oz.
Water .. .. .	1 gall.
Strongest solution of ammonia .. .. .	4 oz.

#### VI.

Yorkshire wash:—

Strongest solution of ammonia .. .. .	1 oz.
Common water .. .. .	1 pint

#### VII.

Silicate of soda or potash or water-glass is in itself a good detergent. It is added to cheap soaps to allow of the retention of large quantities of water in the finished product. The retail chemist should not attempt to manufacture the article. It is purchased in casks, and is a thick, viscid, translucent mass, flowing very slowly. When dissolved in hot water it forms a solution which unites with certain kinds of soap very readily (curd soap, yellow soap, and soaps containing resin). Probably a useful washing liquor could be made from this substance.

#### VIII.

Quillai, or soap bark, is worth attention in this connection. Dried soda 77 parts, quillai bark 23 parts, in powder, have been recommended in Germany as a saleable washing powder.

44/32. *Delta.*—Bromhydric Acid is hydrobromic acid. You will find very full details as to its manufacture in THE CHEMIST AND DRUGGIST for 1881, pages 339, 380, and 483. Much further information is given in subsequent volumes, for which consult indexes. Martindale and Westcott's "Extra Pharmacopœia" says:—"It is used to allay nervous excitability and exhaustion, as a solvent for quinine and preventing quinism, and as an alternative for bromide of potassium; 8 minims will dissolve 5 grains of quinine. One drachm containing 8 per cent. of hydric bromide equals 8 grains of bromide of potassium.



39/65. **Chili Paste.**—Mr. A. Paterson sent us a formula, which we published in *THE CHEMIST AND DRUGGIST*, March, 1883, page 144, as follows:—Macerate  $\frac{1}{2}$  lb. of cayenne pepper in powder in 2 lbs. of olive oil for three days; press, filter, and add to the warm product 6 oz. of spermaceti, melted. Perfume with a few drops of oil of lavender.

A. E. H.—A special article on hair-oil was published in our last volume, page 224. Here is a **Mixed Perfume for Hair-oil** published at page 248 of the same volume. Bergamot, 1 oz.; lemon oil,  $\frac{1}{2}$  oz.; lavender oil, 1 drachm; clove and cassia oils,  $\frac{1}{2}$  drachm each. Or (page 640), bergamot, 4 oz.; lemon oil, 2 oz.; clove oil, 1 oz.

**Diars Cordial** is a corruption of the word "diascordium." As stated in *THE CHEMIST AND DRUGGIST* for 1882, page 321, this was an electuary in all the Pharmacopœias a century ago, and took its name from the small proportion (1 in 27 $\frac{1}{2}$ ) of the leaves of *Tecurium scordium* it contained. It was a mild opiate, containing 1 grain of opium in 9 or 10 scruples. It has been further confused with diacodium, otherwise called "syrupus e meconio," and now "syrupus papaveris," or "syrup of white poppies." When diascordium, or diacodium, is now asked for, chemists generally supply syrup of white poppies, sometimes flavouring it with a drop of essence of peppermint.

43/9. **G. W.—Liquor Ammoniaë Valerianatis.**—Three formulæ are given by Hager:—

	Parts
Solution of ammonia (10 per cent.) .. ..	28 5
Diluted alcohol .. ..	30
Commercial valerianic acid (the so-called tris hydrate) .. ..	20, or sufficient

Mix the ammonia with the spirit, and add the valerianic acid until a neutral solution is obtained. Make up the volume to 100 parts with distilled water. The fluid contains 20 per cent. of ammonium valerianate, or, 3 to 5 c.c. (48 to 82 minims), diluted with tincture of valerian, or in mixtures.

#### II. (PARIS HOSPITAL.)

	Parts
Valerianic acid .. ..	2
Ammonium carbonate .. ..	2
Extract of valerian .. ..	2
Distilled water .. ..	100

Mix according to art.

#### III.—VALERIANATE D'AMMONIAQUE LIQUIDE (PIERLOT).

	Parts
Distilled water .. ..	95
Extract of valerian .. ..	2
Valerianic acid .. ..	3
Ammonium carbonate .. ..	1, or sufficient to neutralise

Dose, 1 or 2 teaspoonfuls morning and evening, for hysteria, epilepsy, &c. Valerianate of ammonia is in the French Codex.

43/12. **Composition Powder.**—Subscribers would save themselves much time if they would consult the indexes to *THE CHEMIST AND DRUGGIST*. This will make at least the seventh time we have published the formula for composition powder since 1880.

Bayberry bark .. ..	4 oz.
Canadian pine ( <i>Pinus Canadensis</i> ) .. ..	2 "
Ginger .. ..	2 "
Cayenne .. ..	2 drachms
Cloves .. ..	2 "

3/42. **W. N. Liq. Ferri Hypophosph. Co.**—Mr. Gibson's formula for this preparation, which is said to be preferable to "Chemical Food," was published in the *Pharmaceutical Journal* (1882), and is as follows:—Dissolve 6 oz. 112 grains of hypophosphite of lime in 50 oz. of water. Raise the solution nearly to the boiling-point; acidify with  $\frac{1}{2}$  oz. hypophosphorous acid; stir in 2 oz. 382 grains of sulphate of iron, 5 oz. 364 grains sulphate of soda, and 2 oz. 22 grains sulphate of manganese; continue stirring for two or three minutes. Double decomposition takes place. Throw the mixture on a

paper filter, and wash the precipitate with hot water till the filtrate measures 70 oz. Dissolve separately 3 oz. 368 grains of hypophosphite of calcium in 25 oz. of water, filter, mix the filtrates, add to the solution the remaining 5 oz. of acid, make up with water to 100 oz. The liquor will deposit a little for a few days, but it can then be decanted, and will remain clear. Each fluid drachm would contain 1·6 grain of hypophosphite of iron, 2 grains of hypophosphite of lime, 2 grains of hypophosphite of soda, and 1·1 grain of hypophosphite of manganese.

43/43. **W. L.—Soluble Tincture of Capsicine.**—We do not exactly understand what you want, and would advise you to read through Mr. Thresh's papers on the active principle of cayenne pepper in the "Year-book of Pharmacy," 1876 and 1877. "Capsicin" is the oleo-resin of capsicum, and is yielded from the pepper in the proportion of 20 to 25 per cent. This, combined with salt, and coloured, if necessary, with annatto, forms what is called soluble cayenne pepper (Professor Redwood). "Capsaicin," which Mr. Thresh separated from the capsicin, is a most acrid and dangerous substance, and totally unfit, we should say, for any ordinary preparation.

45/51. **B.** finds some difficulty in making **Ess. Menth. Pip. B.P.** The oil does not dissolve thoroughly, but seems to mass at the bottom of the vessel, and the solution will not clear. The oil used is H.G., and the spirit is believed to be pure. The same difficulty has not been experienced before.

We should presume the oil has been kept some time, in which case it is likely to deposit. Perhaps other pharmacists have had a similar experience.

D. F.—We will bear your wishes in mind, and try to satisfy them. Thanks for your compliments.

44/61. **Fuscus.—Blackheads (Comedones)** are associated with a weak state of the skin. Generous diet and tonic treatment are required. Plenty of soap and water, with friction, and, as an astringent to invigorate a debilitated skin, a lotion of perchloride of mercury in emulsion of bitter almonds (2 grains to the ounce) and spirits of wine. (Erasmus Wilson, in Quain's "Dictionary.")

39/10. **Puzzled.—Washing Blue.**—Formerly (and still, to a certain extent) a mixture of starch, with sufficient indigo or neutralised sulphate of indigo (caeruleo-sulphate of potash) to form the required tint. Now more often made with artificial ultramarine in place of the indigo. R. M. Collingham, of Hull, makes a machine for forming the cubes in which the blue is sold. **Knife-powder.**—"Puzzled" wants a good receipt. We know of nothing better than emery-powder.

38/45. **Dido.—German Yeast.**—A good yeast, which will keep for months in closed vessels or packed in waxed paper, may be produced by taking ordinary beer-yeast in a canvas bag and gradually pressing out the moisture in a screw-press until it acquires the consistence of soft cheese.

**Mr. Cullwick (Kandy, Ceylon).**—The conduct of the physician, as described by you, was most inhuman; but we should not be justified in publishing your letter, unless we could ourselves investigate the whole circumstances, and, in any case, we have not much sympathy with "trial by newspaper." Your information may, however, prove of value.

**For Preserving Lime-juice or Lemon-juice.**—A. H. Samuels recommends 2 $\frac{1}{2}$  oz. to 3 oz. salicylic acid (Kolbe's patent) to every 40 gallons. It should be well mixed with the bulk, and will dissolve slowly on stirring.

40/4. **A. W.—Mystery Gold.**—W. F. Lowe, in the *Chemical News*, says that he examined a bracelet of this alloy, which had been sold as gold to a gentleman in Liver-



ool. It is believed to be manufactured chiefly with the object of defrauding pawnbrokers, to whom it is offered in ledge. It will stand the usual test of strong nitric acid.

The alloy, after the gilding had been scraped off, had about the colour of 9-carat gold. Quantitative analysis showed that it contained silver 2.48, platinum 32.02, and copper (by difference) 65.50. Qualitative analysis had shown that it contained no other metals.

43/17. *Manufacturer* writes:—"Could you or any of your readers kindly give me any process for making an aniline or coal-tar dye soluble in a fatty substance? Some eminent chemists say it cannot be done, but I am of the opinion it can, although I have failed in all experiments to do so."

We should be glad to hear what our readers have to say on this matter. Solubilities are characters that can hardly be modified. They depend on some of the obscurest molecular phenomena, which seem quite out of reach. It is possible that some aniline dye may be found to be soluble in oils, but these substances are either soluble or insoluble, and it is a question of discovery rather than invention.

41/42. *Paste to Adhere to Tin*.—Mr. J. Oldham, of Mansfield, finds that the best paste to make the label adhere to tin is made by adding one-eighth of acetic acid to either mucilage or paste, preferably the latter.

### Chemists' Circulars.

To the Chemist and Druggist—

SIR.—Some time ago you offered a prize for the best specimen of a chemist's trade circular, and I have therefore no doubt you will read with interest the enclosed production, which I picked up during a recent sojourn in a Welsh watering-place. The putter forth of this "bold advertisement" does not appear to be a Welshman, and probably he considers himself a pharmacist *in paribus infidelium*, for he uses "prave orts," as you shall hear. He begins by claiming it as a "peculiarity" of his "system" that all his drugs are pure, and all prescriptions, &c., entrusted to his care accurately dispensed, "under the immediate superintendence of the principal." The former assertion is rather hard upon his neighbours, and the latter somewhat a strain upon himself, since he advertises two separate "establishments." As Artemus Ward says, "Where is he, principally?"

But these are trifles to what follows. He may well claim superiority over his fellows, he may even be ubiquitous, who has invented a "tooth-ache specific" which, after extraction (see page 6), can relieve pain, and stop the tooth, and so render it "serviceable in mastication, thereby avoiding the disfigurement which ensues, and preserving one of the chief agents for the proper digestion of food"! This wonderful preparation is almost equal in its virtues to the much-advertised American "oil," which is said not only to have caused a new leg to grow in the place of one that had been cut off, but, when rubbed upon the amputated limb, to have caused it to grow into a new man.

An equal triumph of pharmacy bespeaks our attention on page 7, viz., a pill, purporting to be compounded of "dandelion, rhubarb, and ginger," and "indigestion and liver complaints." This medicine has all the virtues that so bold a blending of the allopathic with the homœopathic system might be expected to generate. Those nervous and narrow-throated persons who "never could take a pill" will rejoice to hear that the mere "sale" of this, and the "testimonials" of those who have used it, are "a sure and true remedy" against "flatulency, constipation, &c." Here then is the very thing the age demands—unless, indeed, it should prove more difficult to "swallow" the testimonials than the pills. What strides has not pharmacy taken under the auspices of our beloved Society! Even the "sympathetic" and "intentional" pills of the early part of the last century had to be taken by at least one person before they would physic a neighbourhood, but here we have an article that will do our business without having ever been taken at all!

But I must stop. I cannot hope to exhaust the interest of this remarkable circular. Peruse it, sir, for yourself, and if a doubt should cross your mind as to whether the wonders it

sets forth are not traceable to its author's defective English rather than to his superior pharmacy, give that doubt the more generous answer. I have seen the gentleman but once, but I can assure you he is a very capable person. He will tell you so himself.

I am, &c.,

July 28.

EX CAMBRIA.

[As our correspondent intimates, the pamphlet presents several other points of interest. For instance, it is novel to find hair-brushes and small-tooth combs classed under "preparations for the complexion"; while an extract which "cleanses the head from scurf or dandriff, and by its healthy action on the roots of the hair encourages its growth, and prevents it falling off or turning grey," must indeed be "invaluable" to persons whose heads are at all liable to fall off, or who wish to encourage the growth of their top storeys.—ED.]

42/30. *Starch Gloss*.—For formulæ, see page 64 of our January number. The words "Starch Gloss," we believe, are not registered by themselves, nor do we think the Comptroller would grant registration, as the words are in common use. The words "Critchley's Starch Gloss," in white letters on a black ground, in a border, were registered by T. Critchley, of Blackburn, on January 14, and registration would probably be granted only to such a fancy design embodying the words as could not in any sense be mistaken for the trade-mark previously registered.

42/1. *Un Pharmacien*.—*Shaving Cream*.—The following is said to be a good formula, but we do not know how nearly it resembles Lloyd's "Euxesis." It is from THE CHEMIST AND DRUGGIST, 1883, p. 622:—

						Oz.
White soft soap	..	..	..	..	..	4
Spermaceti	..	..	..	..	..	$\frac{1}{2}$
Salad oil	..	..	..	..	..	$\frac{1}{2}$

Melt and stir till cold. Perfume to taste.

44/52. *W. H. and S.*—The book you mention is published at 51 Great Queen Street, W.C.

36/17. *W. H. B.* wants a formula for *Liquor Copaibæ* soluble in water without santal, buchu, or cubebs. Can any reader supply this?

44/29. *Student*.—*Tinct. Quiniæ Co.* is tinct. quiniæ P.B. As explained in THE CHEMIST AND DRUGGIST for February, 1882, a solution of quinine in strong alcohol was in general use before 1851. In that year a solution of quinine in tincture of orange was made official in the London Pharmacopœia under the name of "Compound Tincture," and was introduced, also, into the British Pharmacopœia of 1864. The same preparation, slightly modified, is called "Tinct. Quiniæ" in the Pharmacopœia of 1867.

34/44. *W. P.* writes:—"I have 2 gallons of aq. lavand., which I made three months ago, and, from some reason I cannot explain, it is, when filtered, of a beautiful golden colour, and stains a handkerchief quite yellow. I should esteem it as a very great favour indeed if you can inform me of any process by which I can get rid of this yellow colour. I have tried filtering through charcoal and magnesia."

If animal charcoal has failed to remove the colour, your only remedy is distillation, which will not only decolorise, but improve the fragrance. If you do not have the high-class apparatus, extemporise some. A round plaster-tin, with corks in the ends, makes a good condenser, and any good strong bottle will do for a still. Of course, use a water-bath as your source of heat. It might be as well to get the consent of your Excise officer to this proceeding if you decide to adopt it.

39/47. *W. T. L.* asks for an explanation of the following:—

The windpipe and part of the lungs of a bullock were bought to feed a dog. It was boiled and put out in the back



premises. At night we were surprised to see the saucepan and contents strongly luminous and shedding a light on things in the immediate vicinity of the pan. The luminosity was mostly in the windpipe; in fact, when this was cut off and held on a fork you might easily read print by it.

[The phenomenon is *phosphorescence*: it is most frequently seen in fish (particularly the herring), but is quite common to many kinds of animal matter. There is no doubt that it is an accompaniment of decay, in other words, is due to oxidation. The phenomenon is frequently observed in lungs, and the greater luminosity in the windpipe is simply due to the fact that that part putrifies more quickly. Hot weather is favourable to the condition.]

The same correspondent asks what is wrong with the ink he uses? If it is a logwood ink it contains too much bichromate.

42/32. G. B. (Dublin).—We would read the recipe in plain English thus:—

Powdered Venetian talc .. .. .	30 grains
Powdered orris root .. .. .	30 grains
Powdered starch .. .. .	½ oz.

Venetian talc is softer than French chalk, but is also a silicate of magnesia. "Orris Tirenzie" we take as a misreading for "Orris Florenzie," in other words, *Iris Florentina*.

#### A Major's Dirge.

"No Majors need apply."—A recent advertisement in the *Pharmaceutical Journal*.

"I had one who would spell Clarke without an e."—*Vide* Mr. Martindale's letter, *THE CHEMIST AND DRUGGIST*, July 15, 1885.

"I had one recently who made more mistakes than any junior I ever employed, and who actually did not know what Rochelle salt was."—Mr. Thomas, in *THE CHEMIST AND DRUGGIST*, p. 312, June 15, 1885.

THE cyprus and narcissus now I weave upon my crest:

The fire of youth is gone for aye, life's robbed of all its zest:

The pints of midnight oil, alas! have all been burnt in vain:

In vain I fierce with Ganot fought, and maddened my poor brain:

In vain through Attfield's mystic lore with fervid zeal I went:

In vain o'er Bentley's flow'ry maze my noble form I bent.

When passed the Major, proud I stood, joy sparkled in my eye,

But thus my cup of bliss was dashed—"No Majors need apply."

I thought, "This man's eccentric, sure!," but go where'er I would,

Said principals, in accents fierce, "A Major! you're no good."

Said one, "I'd an assistant once, a Major man was he,

Who knew so little that he spelt a Clarke without an e."

Another said—"Why, Rochelle salt my Major could not tell,

He blisters spread with irons hot, and on sheeps' skins as well.

One day I left this youth in charge, and when I came at night

A spectacle both grim and grave met my astonished sight.

My windows smashed, a hooting crowd, custodians of the law,

While on the roof, all blood-besmeared, my Major man I saw,

And on the ground, of poisoned men there lay just twenty-five.

To say the least, with such a man a business could not thrive."

I thirsted for that Major's blood, who such a fool had been,

But finding he was long since hung I left with saddened mien.

O! spectral lights of faded bliss, your fires grow faint and dim,

Each dream of mine now haunted is by spectres gaunt and grim—

The poor-rates rise, the workhouse fills with members of our band:

A cry of bitter anguish swells through this benighted land.

Oh! lives there not one generous soul, one spirit bright and fair,

Who'll bid us hope, and raise us from our Lethe of despair?

INSTANET.

PHARMACEUTICAL MUSEUM IN SYDNEY.—The following circular has been issued:—"142 Phillip Street, Sydney, February 16, 1885.—Pharmaceutical Society of N. S. Wales.—Dear Sir,—With pleasure I have to inform you that a collection of *materia medica*, and articles allied thereto, is being formed by the Pharmaceutical Society of N. S. Wales. The Council of the Society desires me to bring this matter under your notice, and I shall be happy to take charge of any specimens, preparations, or ores which you may feel disposed to forward. Trusting you will take an interest in furthering such a desirable object, I am, dear Sir, yours truly, W. T. Pinhey, Secretary." An excellent opportunity is offered to English firms to bring under notice any special preparations in chemicals, &c.

## Obituary.

AUSTIN.—On July 30, Mr. James Battle Austin, pharmaceutical chemist, Bristol. Aged 63.

BRAMLEY.—On August 2, Mrs. Mariah Bramley, chemist and druggist, widow of James Bramley, Old Basford, Nottingham. Aged 83.

BRAYSHAY.—On July 23, Mr. William Bolam Brayshay J.P., of Stockton-on-Tees.

GUMM.—On July 13, at 57 James Street, Devonport, John Gumm, chemist, aged 64. He was in business, and acted as postmaster of a branch office in Pembroke Street for more than thirty years. He was much respected in the neighbourhood.

LANDERER.—Dr. Franz Xavier Landerer, one of the best known pharmacologists in Europe, died at Athens on July 19, 1885, at the age of 76. He was born at Munich in 1809, and in 1833 received the appointment of Court apothecary to King Otho, who was himself a Bavarian. He became the recognised leader of Greek pharmacy, founded a pharmaceutical school, edited the national pharmacopœias, and was given the chair of physics, chemistry, and pharmacy in the University. While King Otho reigned Landerer was protected, but after his deposition in 1862 the Greek jealousy of foreigners brought about the loss of one after another of his public appointments. For years past Dr. Landerer has been in the habit of sending to us and to many German and American journals notes on all sorts of topics, written in an almost undecipherable style in a mixture of languages, German predominating. We have occasionally printed some of these notes, but many of them had but a remote relation to pharmaceutical topics. Dr. Landerer was an honorary member of the British Pharmaceutical Society, and of some fifty other societies. He was honorary president of the Panhellenic Society of Pharmacy; Knight of the order of Maximilian of Bavaria, of the order of Francis Joseph of Austria, of Medjidie of Turkey, &c. A report says that half of Athens attended his funeral, witnessing the high respect and affection which he had won in his adopted country.

NEW.—On July 19, Mr. Walter William New, chemist and druggist, Essex Road, London. Aged 49.

STANNARD.—On July 28, Mr. Frederick John Stannard, chemist and druggist, Croydon. Aged 60.

TOWNLEY.—On July 21, Mr. Fitz-William Bennett Townley, chemist and druggist, Landport. Aged 30.

WILLIAMS.—On July 21, Mr. John Havad Williams, chemist and druggist, Perth. Aged 35.

WING.—On July 23, Mr. Thomas Newton Wing, pharmaceutical chemist, Melton Mowbray. Aged 75.

*Notices of deaths, marriages, removals, and changes in firms are published free if sent to us properly authenticated.*

## Suggestions.

A GALLON of varnish weighs about 8½ lbs., and should cover a flat surface measuring on an average 100 square yards. Crystal paper varnish is more affected by temperature, and a gallon will cover about 90 square yards in winter, or 120 in summer.

OXIDE OF ZINC, according to Professor Peterson, of Kiel, is just as good as iodoform in the treatment of wounds, is not poisonous, is cheaper, and does not smell offensively.

TO PREVENT CARBOLIC ACID TURNING PINK.—An American correspondent of the *Pharm. Centr.* states that many manufacturers of carbolic acid prevent it from turning pink by adding a small quantity of phosphoric acid.

A BROWN HAIR-DYE.—The *Pharm. Centr.* says that the addition to a pomade of a spirituous solution of catechu in considerable quantity will by constant use colour the hair a beautiful brown.



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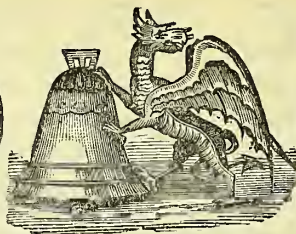


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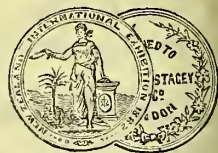
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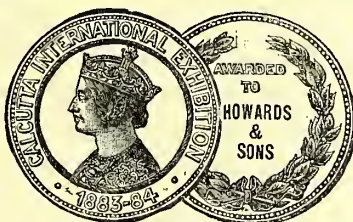
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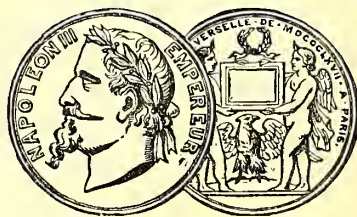
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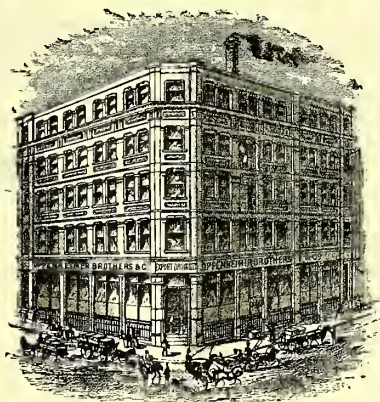
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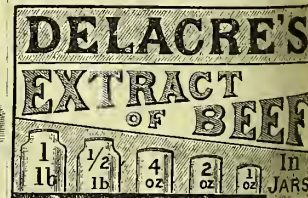
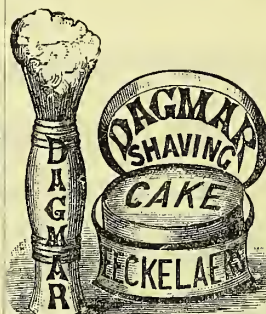
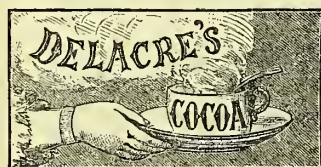
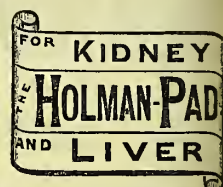
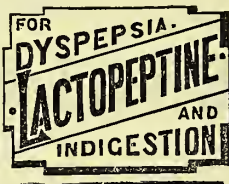
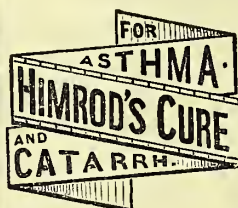
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Alcool de Menthe Ricques	44/	1/8. Capsules Matiao	38/	2/3. Guyot's Goudron	18/	7/0. Rabuteau's Elixir Ferrug.	65/
Ditto ditto	24/	4/6. " Raquin	30/	1/1. Laville's Gout Tincture	90/	2/9. " Sirop	27/
Anbergier's Syrup	27/	4/6. " Mathey Caylus	28/	1/1. " Pills	90/	4/0. Bacahout	30/6
Pâte	16/	4/6. Chassaing's Wine	38/6	2/3. Papier Fayard	13/6	4/6. Reynal's Bougies	42/
Bay Rum	54/	2/9. " Pills	24/6	1/1 1/2 Ditto	7/	2/9. Ricord's Injection	24/
Ditto	27/	4/6. Clin's Bromide Cam. Dragées	45/	4/1. Papier Fruneau	27/	4/6. " Capsules	38/
Belloe's Charcoal	14/	5/0. Bau Botot	38/	2/3. Ditto	15/	8/0. " Syrup	72/; 2/9; 28/
" Lozenges	13/	3/0. Ditto	24/	1/8. Pâte Anbergier	14/6	1/6. Star Paper	13/
Blancard's Pills	30/	2/6. Espic's Cigarettes	14/	2/0. " de Berthé	16/	2/9. Vallet's Pills	32/
Ditto	18/	5/6. Elixir de Coca	48/	2/9. " de Coca	28/	1/8. " ditto	14/
Bron's Injection	27/	2/9. Flon's Syrup	23/	1/9. " de Georges	13/	4/6. Veloutine (White, Pnk, Yel.)	89/
Bugeand's Wine	35/	2/0. Gayetty's Paper	16/	1/1 1/2 " Ditto	8/6	3/6. " ditto	30/
Bugue's Vinegar	30/	2/8. Granules Arsen. Acid	15/	1/8. " de Nafé	13/	3/0. Vichot's Trochisques	32/
Ditto	15/	2/8. " Iron	15/	1/8. " Regnaud	13/	4/6. Valentine's Meat Juices	38/
Candé's (Lait Antéphilique)	36/	2/8. " Soda	15/	7/0. Pierlot's Valerian	80/	4/6. Vin de Coca Mariani	44/6
Capsules Bromide of Camph.	45/	2/9. Grimault's Syrup	24/	2/9. Rabuteau's Dragées Ferrug.	28/		

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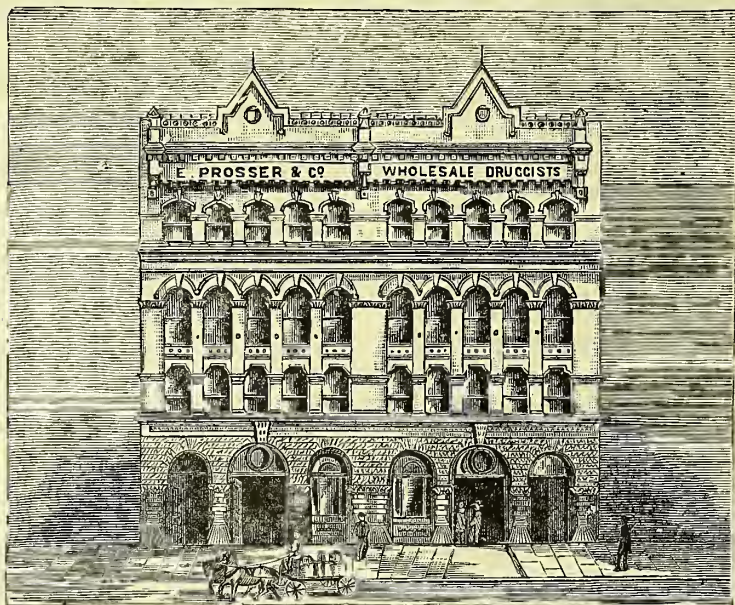
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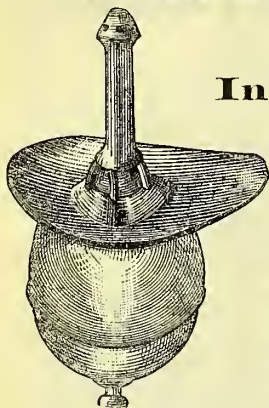
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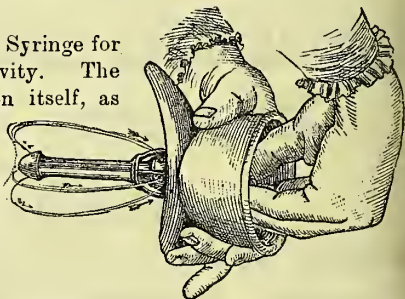
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ACID, CARBOLIC or Phenol Absolut.	Fine white hard crystals ... ..	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
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GELLOIDINE (Patent) — — —	Gelatine plates ... ..	Purest Pyroxylin; in explosive.
CHLORAL HYDRATE — — — —	White cake and crystal ... ..	See Liebreich's, below.
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BROTON CHLORAL — — — —	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE — — — —	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
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ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
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See Report of the Physiological Action.

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The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

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As originally introduced by A. P. Towle, and free from stamp duty for dispensing. 4 ozs., 4s.; ½ lb., 5s. 6d.; 1 lb., 10s.

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In 1, 2, and 4 lb. bottles, at 3s. per lb., and 6d. and 1s. boxes. Foiled, lined, and neatly got up for the counter, 4s. 6d. and 9s. per doz. Quantities of 7 lbs. of Lozenges and upwards stamped with chemist's own name free of charge.

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Show Cards and Bills with name on application with instructions for forwarding.



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**PURE FLUID MAGNESIA.**

*The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.*

For over 60 years in use as an excellent remedy in cases of

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Sold by all respectable Chemists, in LARGE-SIZED Bottles (the 1s. size containing nearly  
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CAUTION.—Observe that the Signature of the Inventor is on every label.

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*In all our Advertisements from this date, the attention of the Public will be called to these alterations, and they will be requested only to purchase such Bottles as have the Name Engraved on the Government Stamps, and the Name in Water Mark on the Labels.*



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Containing all the digestive principles of the fresh pancreas. Used to prepare peptonised or partially digested food (no apparatus beyond a jug and a saucepan required), and also medicinally as a digestive.

In 4, 8, and 16 ounce Bottles, to retail at 2s. 6d., 4s. 6d., and 8s. 6d.

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An exceedingly active Fluid Pepsine. Dose—One or two teaspoonfuls with meals.

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A concentrated partially digested and solidified beef tea, of delicate flavour. Unlike the various Extracts and Essences of Meat, it contains much of the fibrin or flesh-forming element of the beef in solution. Tins, 2s.

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For Infants, Children, and Invalids. Containing the natural digestive principles of the pancreas; when mixed with warm milk a process equivalent to partial digestion takes place, by which both the food and milk are adapted for rapid absorption.

In no other food has this result been obtained. It can therefore be taken with comfort when all others disagree.

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**SULPHUR TABLETS** are composed of Sulphur, Cream of Tartar, and other harmless ingredients of repute for their purifying qualities.

**SULPHUR TABLETS** are put up in handsome decorated tin boxes, each containing one Gross, and are sent out carriage paid at the following prices, with Counter Bills and Window Slips.

1 Gross 8/- per Gross, net cash with order.	10 Gross 7/3 per Gross, net cash with order.
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An excellent remedy for all stomachic complaints.

Indispensable in cases of loss of appetite, weakness of the stomach, bad breath, flatulency, nausea, colic, cold in the stomach, heartburn, formation of sand and gravel, excess of mucus, jaundice, distaste, vomiting, sick-headache, spasms, constipation, over eating and drinking, worms, hypochondriasis, liver complaint and hemorrhoids.

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SHOW CARDS AND BILLS ON APPLICATION.



# Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

## IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,  
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND

## FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
Baiss Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	Birmingham	Goulding, Messrs.	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	Liverpool
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	York
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Raines, Blanshards & Co.,	Edinburgh
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Curling & Co.,	"	Hopkins & Williams,	"	Sanger, J., & Sons,	London
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Dobbin, W., & Co.,	Belfast	Hunt, A., & Co.,	"	Southall & Co.,	Birmingham
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Sutton, W., & Co.,	London
Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Tomlinson, Hayward & Co.,	Lincoln
Dunn & Company,	"	Lynch & Co.,	"	Tracher, Hodgkinson & Co.,	"
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westrup, J. B.,	Kensington
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Westwood & Hopkins,	Lincoln
Evans, Lescher & Webb,	London	Maw & Son,	"	Woolley, James,	Manchester
Ferris & Co.,	Bristol	Meggeson & Co.,	"	Wyleys & Brown,	Coventry
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After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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Pharmaceutical Chemists,

**LIVERPOOL,**

**EXPORT DRUG MERCHANTS,**

IMPORTERS OF

**BRAZILIAN DRUGS.**

**AMERICAN & CONTINENTAL SPECIALITIES.**

**MENTHOL.**

MANUFACTURERS OF

**OL. LAVAND. RECT.**

Now largely replacing the Mitcham Oil. 21/- lb.

**LAC BISMUTHI**

LAC BISMUTHI ET CERIL.

**HYDROBROMIC SYRUP OF HYPOPHOSPHITES, &c.**

London Dépôt—Snow Hill Buildings, E.C.

## SPECIAL PHARMACEUTICAL PREPARATIONS.

### GLYCEROLE OF PEPSINE

A SPECIAL PREPARATION.

Perfectly reliable, and the most valuable fluid form for the administration of *Pepsin Porci*. It is of definite strength and slightly acid; free from odour, and almost tasteless.

7/ per lb., C. Qts. 6/6, W. Qts. 6/.

WILL KEEP GOOD IN ANY CLIMATE.

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The new remedy for Eczema and Ringworm. Imported direct from the interior of Russia. See *Pharm. Journ.*, pp. 381, 439.

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FROM THE FRESH AUTUMNAL ROOT.

Prepared by a special process in which the flavour is preserved and the bitter principle retained; the product being bright and clear, with all the medicinal qualities of the fresh root unimpaired.

1/10 per lb., C. Qts. 1/8, W. Qts. 1/6.

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THOMAS GREENISH, Pharmaceutical Chemist,  
20 New Street, Dorset Square, N.W., and  
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# GOLD MEDALS.



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## THOMAS WHIFFEN, BATTERSEA, LONDON,

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WHITE AND UNBLEACHED SULPHATES. ALSO BISULPHATE,  
MURIATE, BROMIDE, PHOSPHATE, CITRATE, SALICYLATE,  
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## QUINIDINE, CINCHONIDINE, CINCHONINE, ETC.

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The Alkaloids of India, Cinchona Succirubra Bark, and

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The Advertiser is the Proprietor and Inventor of this well-known Brand.



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SPECIALITIES:—

American Drugs, Roots, Barks &amp; Herbs, Fluid Extracts, &amp;c.

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Assorted gross on receipt of P.O.O., 8s.

Catalogue of Vegetable Materia Medica sent on receipt of postage stamp.

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ARE THE BEST AND CHEAPEST.

Attention is called to the following articles:—

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Peruvian Mixture Capsules.....	10/ & 7/6	3/ & 2/
Matico Oil and Copaiba do.....	11/	2/6
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" " No. 1.....	5/6	1/3
" " No. 2.....	5/	1/6
Copaiba, Alum and Cubebs.....	5/9	1/6
Compound Ferruginous.....	5/9	1/6
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Male Fern Oil.....	10/6	3/
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Denoual's Injection (to insure a radical cure in two days).....	16/	2/9

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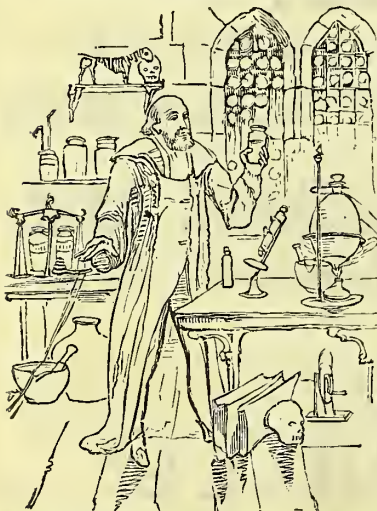
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One Box Warranted to Cure almost the Worst Ailment.



**IMPORTANT to  
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Once you get your  
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Wonderful Medicine a  
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In BOXES, 1s. 1½d.  
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AGENTS WANTED

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## METHYLENE.

Discovered to be a general Anæsthetic by  
Dr. RICHARDSON in 1867.  
7-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.  
**COMPOUND ANÆSTHETIC ETHER.**  
For producing Local Anæsthesia.  
In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

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4-oz. and 16-oz. Stopped Bottles, 3s. 6d. and 12s.

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First introduced as a Medicine by Dr. RICHARDSON.

**ETHYLATE OF SODIUM**  
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Caustic, 2s. 6d. and 4s.

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For promoting the Healing of Wounds by the first intention.  
In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d.  
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## CHARCOAL CAPSULES.

Containing pure Vegetable Ivory  
Charcoal. In Boxes,  
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## DINNEFORD'S FLUID MAGNESIA.



**PERFECT IN PURITY AND UNIFORM IN  
STRENGTH.**

Sold by all Wholesale Druggists, and by the Manufacturers,

**DINNEFORD & CO.,**  
Pharmaceutical Chemists,  
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## "MALMERFINE."

JAMES &amp; CO., 16 Moorfields, LIVERPOOL,

Call the attention of the Trade to their preparation "MALMERFINE." It  
is an undoubted cure for Sea Sickness, giving instant relief in all cases. A  
Surgeon of Mail Steamers (Walter Dunn, B.A., M.R.C.S., Eng.; L.S.A.  
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Being an artificial Gastric Juice, combined with Stomachic Stimulants,  
it is also curative in Indigestion and all stomach complaints. Price, 2s. 9d.  
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Goodall, Backhouse & Co., and most Wholesale Houses. The Proprietor  
will give special terms to first-class Chemists in seaports who will under-  
take to push it.

## THE "MALMERFINE" MAGNETIC BELT.

Price One Sovereign, will in nearly all cases prevent sea sickness. Chemist  
obtaining customers for it are allowed a very handsome commission for their  
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bines all the external means which have been found successful in preventing  
sea sickness, viz., warmth, magnetism, mechanical pressure on the muscle  
affected, and absorption of medicinal agents through the pores of the skin.  
Send for particulars.

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An Infallible Remedy and Certain Cure

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BOTTLES 2/6 EACH.

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## SPECIALITIES— PEPTOLEINE

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A VALUABLE REMEDY IN CONSUMPTION AND OTHER WASTING DISEASES.

This elegant preparation is an Emulsion containing 50 per cent. of the finest Cod-Liver Oil, combined with nutritious tonics on an entirely new principle. It is rendered palatable by the addition of Aromatics, and is, we venture to assert, the most perfect emulsion of Cod-Liver Oil hitherto brought before the notice of the Medical Profession and the Public. We guarantee it to keep well in any climate.

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These preparations are manufactured from the best selected Drugs, and are recommended for their uniformity and reliability. They are so prepared that one fluid ounce of the finished Extract represents an equivalent weight of the pure drug.

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Salicylic Acid and all Salicylic Salts (Kolbe's Patent). Kahlbaum's Pure Alcoholic Compounds, for original research, &c.  
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Atipyrin and Kairin, the new Febrifuges.

Parke, Davis & Co.'s Fluid and Solid Extracts, Concentrations, and other Pharmaceutical Preparations.

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Chanteaud's Seidlitz, Retail 2/6; per doz. 24/, less 25 % | Malto Pepsyn (Hazen Morse's), Retail 2/9; per doz. 24/6.



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The ONLY MEDICINE of the KIND AWARDED A CERTIFICATE of MERIT at the CALCUTTA INTERNATIONAL EXHIBITION, 1883-4,

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Will keep in any Climate, and is therefore specially adapted for SHIPPING, and wherever introduced COMMANDS A LARGE SALE.

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Dr. LALOR'S PHOSPHODYNE makes an agreeable Beverage with Water Only. INVIGORATING and VITALISING the BLOOD with the PHOSPHORIC or active Principle of Life.

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Dr. Lalor's Phosphodyne Laboratory, Hampstead, London, N.W.

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Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

N.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

## CHLORIC ETHER.

SP. AMMON. AROMAT.

SP. ÆTHER. NITROS.

SYR. FERRI PHOS. CO. (PARRISH).

Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations

MANUFACTURERS OF THE CELEBRATED

## BLUE BLACK WRITING INK & COPYING INK

SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d. and 1s. Boxes.

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# BARRON, SQUIRE & CO.

(LATE DREW. BARRON, & CO.),

## WHOLESALE & EXPORT DRUGGISTS BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,  
Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to the having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.*

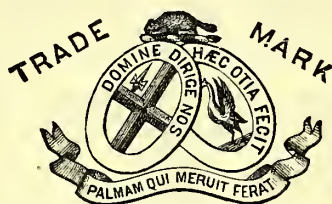


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(Manchester Office: EXCHANGE BUILDINGS. Birmingham Office: BARWICK ST.)

## WHOLESALE & EXPORT DRUGGISTS AND Manufacturing Pharmaceutical Chemists.

*Manufacturers of Druggists' Sundries, and Dealers in Patent Medicines and every requirement for Chemists and Druggists.*

SOLE PROPRIETORS OF

## "SAVARS" SPECIALTIES.

*Prices Current of Drugs and Chemicals, and Druggists' Sundries (Illustrated), supplied on application enclosing Business Card.*

## ILLUSTRATED EXPORT LISTS

(About 200 pages each), containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, Druggists' Sundries, Surgical Instruments, and Patent Medicines, &c., are sent post free to any part of the World on application (ENGLISH, in January and July; SPANISH, in April and October).

THE ABOVE LISTS OFFER UNUSUAL ADVANTAGES AS A MEDIUM FOR ADVERTISEMENTS.

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ALL ADVERTISEMENTS TRANSLATED INTO SPANISH FREE OF CHARGE.



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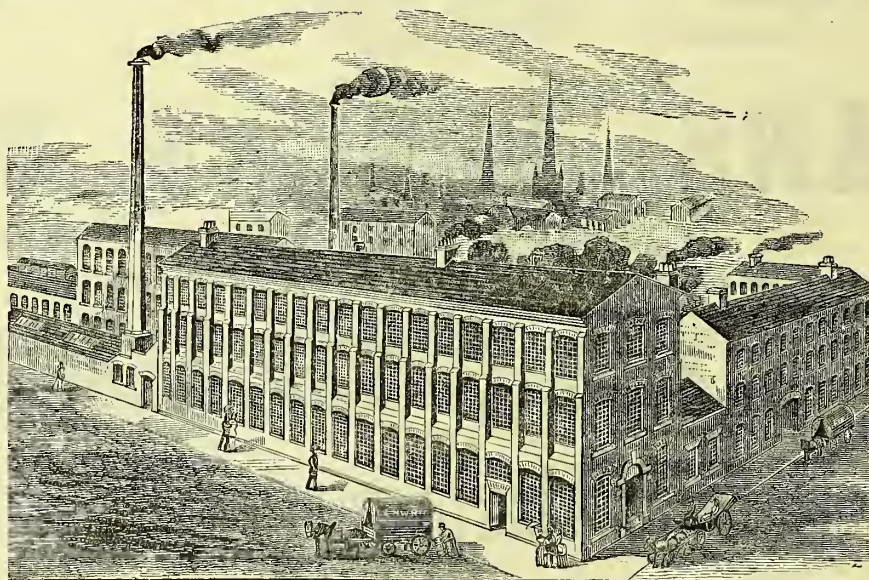
(Partners:—F. WYLEY, M.R.C.S., ENGLAND, L.S.A.—W. F. WYLEY, F.C.S.)

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And 223 UPPER THAMES STREET, LONDON, E.C.

ESTABLISHED 1790.

### WHOLESALE & EXPORT DRUGGISTS & DRUG GRINDERS.



VIEW OF NEW PREMISES, 1884.

### MANUFACTURERS OF CHEMICALS & PHARMACEUTICAL PREPARATIONS.

**\* GELATINE COATED OVAL PILLS.**

The only oval gelatine coated pills of English manufacture in the market.

**\* PEARL COATED PILLS.** Special and extensive list on application.

*\* For Prices and other particulars, see Special Advertisement, page 129.*

**FLUID EXTRACTS.**

**SUBLIMATED SERUM GAUZE.**

**EXTRACT HENBANE (English)**  
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**ESSENCES FOR AERATED  
WATERS.**

**CONCENTRATED WATERS.**

**CHINOQUININE.**

**CHEKAN.**

We were the first importers of this drug. Our liquid Extract is the original preparation.

**OLEATES.**

**MEDICATED ABSORBENT**

**WOOL** (Various kinds).

**EXPRESSED JUICES** (English).

**POWDERED DRUGS.**

Special attention paid to powders of guaranteed purity, which may now be had in sealed 1-lb. tins.

**SCALE PREPARATIONS.**

**HYPODERMIC ERGOTIN**

**TUBES.**

By their use a fresh solution of Ergotin can be at any time obtained.

**FRICTION CAKES** (Various).

We were the first to introduce these liniments in the solid form.

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We are prepared to execute orders for Export, giving every attention to packing and the requirements of the Market for which goods are intended. Having direct representatives in Rio Janeiro and Valparaiso, we are in specially good position with reference to these markets.

SPANISH PRICE LISTS PUBLISHED QUARTERLY.

We shall be happy to forward English and Spanish Price Lists, Book of Order Forms, and Pill List, to any Chemist in the World on receipt of Business Card.



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## WHOLESALE & EXPORT DRUGGISTS, MANUFACTURING, PHARMACEUTICAL, AND ANALYTICAL CHEMISTS.

ESTABLISHED OVER A CENTURY.

SELECT PREPARATIONS AND SANITARY REQUISITES, "HERON" BRAND:—

Soluble Essence of Ginger.  
Soluble Essence of Lemon.  
Ess. pro. Mist. Ferri Co.  
Liq. Santal Flav. Co.  
Sol. Bismuth Aromat.



TRADE MARK.

Alcoholic Solution Coal Tar.  
Coal Tar Toilet Soap.  
Coal Tar Medicinal Soap.  
Coal Tar Tooth Soap.  
Food for Infants (<sup>MALTED IN</sup>  
BULK)

CONCENTRATED INFUSIONS, LIQUORS, &amp; LIQUID EXTRACTS IN VACUO.

*Special attention paid to the Packing of Goods for Shipment Abroad.*

Agents for Hay's Soluble Essences of Ginger and for McKesson &amp; Robbins' Ovoid Pills.

**5 COLEMAN STREET, LONDON.**

London International and Universal Exhibition, 1884, Gold Medal Awarded for our Pharmaceutical Preparations.  
Calcutta Exhibition, First-class Certificate and Two Prize Medals Awarded for our Pharmaceutical Preparations

## HEWLETT'S

### MIST. PEPSINÆ CO. C. BISMUTHO.

Highly recommended in various forms of dyspepsia, having a direct action upon the mucous membrane of the stomach and intestines as a sedative. It can be administered with marked and almost instantaneous effect in the irritative form of dyspepsia, more especially when *pyrosis* is a conspicuous symptom, and pain occurs an hour or more after food. In simple neuralgic gastric pain following eating, occurring in feeble subjects, it is especially indicated, and even in *carcinoma* it has been used with great success in alleviating pain and vomiting.

In the dyspepsia of patients dependent upon some organic disease, and where there is a decided loss of nerve power, it is of singular service. Thus, for instance, a person after a meal complains of a peculiar gnawing and emptiness, with slight pain at the epigastrium, evident signs of general relaxation and loss of nerve power, clinical experience has shown that it is of great service as a tonic and stomachic. A portion of its value arises, it may be, from its action upon the spinal motor nerve-centres. These things as they may, experience has abundantly demonstrated the value of the compound as a stomachic, antidyseptic, and tonic, in general functional atony and relaxation, and in the various forms of dyspepsia, constipation, or diarrhoea, connected with atony of the visceral muscular coat, the Mist. Pepsinæ Co. c. Bismutho is a very valuable remedy. In the *exhausting* *giving of Phthisis*, accompanied with night sweats and restlessness, Dr. MATHEWS, of Nantwich, has used it with marked and a *reciable* effect.

**Price (in England) 10s. 6d. per pound.**

Physicians will oblige, when ordering Mist. Pepsinæ Co. c. Bismutho, by writing Mist. Pepsinæ Co. (Hewlett's).

**Packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 90-oz. Bottles.****LONDON MEDICAL RECORD REPORT.****MISTURA PEPSINÆ COMPOSITA CUM BISMUTHO.**

"This combination of Messrs. HEWLETT is one which has been extensively tested, and with good results. It is justly popular in the profession as a very valuable and effective combination. It serves not only to improve aepsia, but to lessen the gastric pain and to facilitate difficult and painful digestion, without setting up any evils of its own. It is a very good crutch for persons of weak stomach to lean on."—January 15th, 1881.

## C. J. HEWLETT & SON,

### MANUFACTURING AND PHARMACEUTICAL CHEMISTS, 4, 41 & 42 CHARLOTTE STREET, LONDON, E.C. [Established 1832.]



# PURE MENTHOL.—A1 BRAND

(THEREFORE NO STAMP REQUIRED).

No. 1.



No. 2.



No. 3.



No. 4.



No. 5.



6d., 12 in a Box.

LOOSE CONES, all Sizes.

QUOTATIONS SOLICITED.

Special Terms to Shippers  
and large Buyers.All Boxwood patterns  
have Screw Tops.

No. 10.



1/-, 6 in a Box.

5 per cent. Discount for  
Cash with Order, if sent  
direct.We now supply the Box-  
wood shapes assorted, in  
superior hinged outers of  
1 dozen, at 6s. 3d.

No. 6.



No. 7.



No. 8.

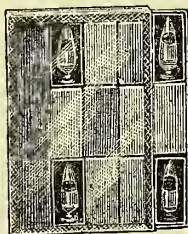


Nos. 9 &amp; 9a.



STYLE	GENERAL DESCRIPTION	PRICE per dozen
1	Glass Bottles with screw caps .....	3/8
2	In plain Willow Boxes, lid serving as holder ..	3/6
3	Glass Bottles with screw caps .....	5/4
4	Glass Bottles with screw caps (Menthol on wood mount, serving as holder) .....	6/9
5	Glass Bottles with screw caps (bullet-shaped cones wrapped in tin-foil) .....	6/9
6	Boxwood, ordinary shape on pedestal .....	5/3
7	Boxwood, barrel shape ..	6/3
8	Boxwood, acorn shape ..	6/3

Nos. 11 and 12.

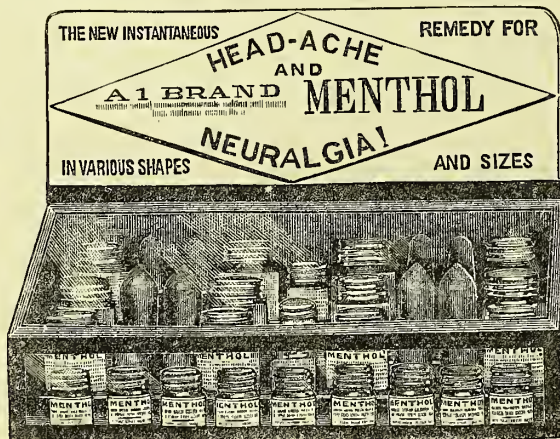
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**A1 BRAND**

STYLE	GENERAL DESCRIPTION	PRICE per dozen
9	Boxwood, skittle shape..	6/3
9a	Do., extra large skittle ..	8/-
10	6d., 12 on a Card .....	3/6
11	6d. Boxwood Pedestals to screw each in a separate box, 12 of which are enclosed in glass outer ..	4/-
12	Polished Sycamore Pedestals, "pull-off" lids, same shape as No. 6 ..	3/6
13	Vegetable Ivory (acorn shape) each in a box, enclosed in glass outer	6/9
14	Boxwood Pyramids to screw each in a separate box, 12 of which are enclosed in glass outer (very saleable) .....	6/9

A Handsome Glass-fronted Show Case (see diagram below) given away to purchasers of 3 dozen of our Brand. This Show Case is made to hold 3 dozen A1 Brand Menthol of any shape or size, the only restriction being that 1 dozen 6d. size be not exceeded in the assortment.

Cost of assortment as in diagram, 15s. 10d. net;  
sale of same realises 30s.  
Profit, 14s. 2d.

A good Show Case invariably doubles the sale of an article, and all Chemists desirous of increasing their business should entertain this.



The Case is 11 in. long by 5½ in. deep, and the lid lifts, so that the goods can be sold from it, making it both a useful and attractive addition to a Chemist's counter.

See above for prices, illustrations, etc., of separate shapes.

All our shapes can be got through any Wholesale House, but if Show Case is required orders MUST be sent DIRECT to  
**A1 MENTHOL DEPOT: 30 PATERNOSTER SQUARE, LONDON, E.C.**



# CHRISTY'S LIST OF NEW DRUGS AND MEDICINES. FREE ON APPLICATION.

## MENTHOL CONES.

WARRANTED PURE.

turned wooden boxes, with Screw-on Lids. Boxwood—Barkels, 6/; Acorns, 6/; Pedestals, 5/; and Cozcos Eggs, 8/ per doz.; to retail at 9d. and 1/1. Boxwood Pocket Cones, 3 6; Willow Boxes, with Unbreakable Cones, 3/6 per doz.; to retail at 6d. in Bottles, 3/6 and 5/6 per doz. Loose Cones, all sizes, 3/ per oz.

INSIST ON HAVING CHRISTY'S BRAND.

Direct Orders for Cash, subject 5 per cent. Show Cards and Counter Bills.

## CHEMISTS' COUNTER GOODS.

**OILICURE**—Rheumatism and Neuralgia; per doz., 8/, 20/, and 28/. Stamps extra.

**ASTHMATICURE**—Certain Relief for Asthma Per doz., 20/ and 28/. Stamps extra.

**SPOGEL SEEDS**—Arrest Dysentery and Diarrhea. Per doz., 8/ and 15/.

**MYOCOM FLY GUM**—Effects an immediate clearance of flies in any room. Non-poisonous. 1/ boxes, 8/ per doz., 72/ per gross case; 2/6 boxes, 20/ per doz.; 5/ boxes, 40/ per doz.

THOMAS CHRISTY & CO., 155 FENCHURCH STREET, LONDON, Introducers of New Drugs.



# MENTHOL CONES,

"ACME" BRAND. GUARANTEED PURE JAPAN MENTHOL.

NICKEL SCREW-CAPPED BOTTLES.. 6d. size, 3/4 doz.; 1/1 size, 5/9 doz.; 1/8 size, 7/9 doz.

HARDWOOD BOXES, PEDESTAL SHAPE .. .. . 3/6 dozen, 1/- size.

VEGETABLE IVORY, ACORN SHAPE .. .. . 6/- dozen, 1/- size.

BOXWOOD, PEDESTAL SHAPE, SCREW LID .. .. . 5/- dozen, 1/- size.

The "New 6d. Menthol Cone," in glass-fronted show box, 3/6 doz.

Cones supplied loose at lowest prices. 5 per cent. discount with direct orders. Quotations solicited.

HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, W.  
PROPRIETORS OF THE EUCALYPTUS AND MENTHOL PENCILS.

NON-POISONOUS,  
SAFE,

# TIKHEEL,

CERTAIN,  
SPEEDY,  
AND  
PLEASANT.

The New Remedy for Neuralgia, Tic, Toothache, Nervous and Sick Headache.

## ONE SIZE ONLY—HALF-A-CROWN.

Price 24/- per dozen, subject to usual Patent Medicine discount. Per gross, £11 8s., net cash, carriage paid, box free. Export Tin-lined Cases charged 7/6 each, delivered f.o.b. Remittance in full must accompany order. For less than One Gross buyers will please write their Patent Medicine House or Wholesale Druggist.

In places, still very numerous, where patents are not cut, and even, as the following letter will show, in towns where cutting is practised, retail Chemists will find it greatly to their advantage to introduce TIKHEEL. This Medicine, retailing at 2s. 6d., costs, according to quantity, from 1s. 7d. to 1s. 9d.; it thus leaves a larger profit than is gained by an ordinary 1s. or 1s. 6d. bottle of Tic Mixture. We do not suppose, nor expect, that TIKHEEL will be pushed where the only result is to make a trade for stores or cutting grocers; but there are large districts where the full price for patents is still obtained, and we shall be glad to furnish Show Cards and Counter Bills, with name and address, to all Chemists who will take up the sale of TIKHEEL.

Messrs. CLARKE & CO.

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GENTLEMEN,—We think it our duty to thank you for having given us the Agency for "TIKHEEL." It has been the most remunerative of all agencies we have ever had. We have a good, steady, increasing sale, and have never had a single complaint—which is a great deal to say.

Your obedient Servants,

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DIRECTIONS FOR USE ACCOMPANY EACH BOTTLE IN SPANISH, FRENCH, AND GERMAN.

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The most Safe, Efficacious, and Prompt **VEGETABLE MEDICINE** for Family Use.  
**COMPOUNDED OF THE PUREST VEGETABLE INGREDIENTS ONLY.**

**FIFTY-FIVE YEARS OF UNINTERRUPTED SUCCESS.**

*Pills in Boxes at 7½d., 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Powders, 1s. 1½d. Ointment, 1s. 1½d. and 2s. 9d.*

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Hand Bills or Posters with  
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Trade Mark Registered, No. 39,661. **FOR**  
**THE HEAD,**  
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**AN EXCELLENT PILL FOR**  
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**A NON-MERCURIAL LIVER MEDICINE**, specially useful  
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Worthy of trade notice. Reliable, and rapidly increasing in  
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Are made of the best materials; perfectly protected; entirely and quickly soluble; coated while soft; not subjected to the injurious effects of heat in the process of manufacture. The mass is worked to the highest possible degree of uniform intermixture, and subdivided with scrupulous exactness. The coating is an inert, tasteless, and odourless compound, which is so transparent, colourless, and thin, that the distinctive colour of each pill is revealed through the coat. No sub-coating is used. The solubility of the coating is not impaired by age. All the official pills, as well as any others ordered by the Medical Profession, can be furnished in this form. They can be implicitly relied upon in every respect. The coating, while thoroughly protecting the pill, will not be found to in any way interfere with the action of the drug, and those who have found sugar or chalk-coated pills objectionable, owing to the liability of the coating becoming insoluble by age, will find our coating to dissolve as readily after many years as when first prepared. It, moreover, does not form a hard tough shell, as is the case with the ordinary gelatine coating. We claim and believe our Coated Pills to be nearer perfection than any similar goods that have been offered, and guarantee the pills to be as quickly effective as any uncoated pills that can be made.

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*Have the Largest Sale of any Medicine in the World.*

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*Wholesale Terms see List of "Proprietary Articles" in most Price Currents.*

**Index to Advertisements, 37-38.**



# A WONDERFUL MEDICINE!

Between thirty and forty years ago a Medicine was introduced to the public and suffering humanity was invited to try the same.

The Proprietor knew from experience that success was certain, but the human breast is so imbued with prejudice, that it forms one of the strongest barriers to break down and the greatest enemy to overcome before any headway can be made towards the mansion of success. Truth has often proved itself to be "stranger than fiction," and it is a fact as solid as truth that

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have now become one of the leading Patent Medicines of the present day. From north to south, and from east to west, they are to be found in the homes of the rich and the poor. All classes of society use them, and they are by thousands declared to be

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For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

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And (late HENRY TURNER & CO.)  
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Importer of Norwegian, Newfoundland, & other varieties.

Low Quotations on application. Delivered at London or Liverpool.

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GUARANTEED ABSOLUTELY PURE.

The attention of Shippers and the Trade is directed to the great advantages in price and quality of this fine Brand of Norwegian Cod Liver Oil.

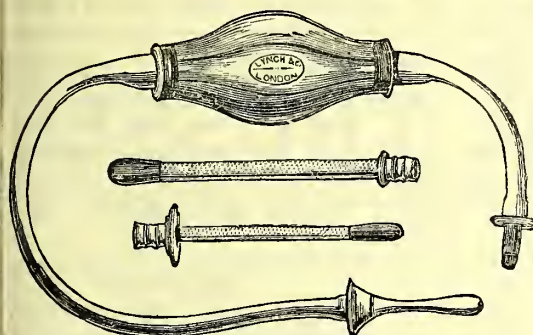
Messrs. J. JENSEN & CO., Proprietors, Manufacturers, and Shippers—the largest producers in the world—guarantee to deliver **ALL OILS PURE**, pale, delicate in flavour, and non-freezing.

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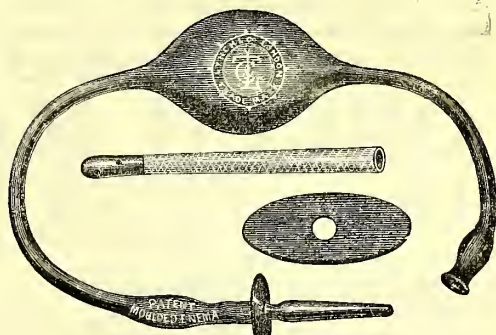




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No. 436.



No. 435 D.

# ENEMAS.

## SUBJOINED ARE PRESENT PRICES:

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9A.	HIGGINSON'S, unvarnished india-rubber, with rectum pipe only, in slide cedar boxes	...	...	...	...	...	...	...	...	per doz.		1	5	0
9B.	Ditto, with elastic-gum vagina pipe and leather shield	...	...	...	...	...	...	...	...	"		1	10	0
4.	Ordinary Higginson's, barrel shape, with bone rectum pipe, elastic gum vagina pipe, to plug on, and patent leather shield, in slide cedar box	...	...	...	...	...	...	...	...	per doz.		1	12	0
9AA.	Ditto, fitted with vagina pipe with reversed current	...	...	...	...	...	...	...	...	"		1	16	0
9A.	Ditto, ditto, with disconnecting mounts	...	...	...	...	...	...	...	...	"		1	14	0
5C.	LYNCH'S (Higginson's principle), black, green, red or white india-rubber, requiring no metal mounts, in one continuous piece, warranted not to split, fitted with vulcanite rectum pipe, in slide cedar box	...	...	...	...	...	...	...	...	per doz.		1	10	0
5D.	Ditto, with elastic-gum vagina pipe, and leather shield, in slide cedar box	...	...	...	...	...	...	...	...	"		1	15	0
6.	LYNCH'S FAMILY (Higginson's principle), fitted with bone bulb pointed rectum pipe for adults, elastic-gum vagina pipe, and elastic-gum rectum pipe with bone shield for children, in mahogany box	...	...	...	...	...	...	...	...	per doz.		2	8	0
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7D.	Ditto, in oval boxes of cloth and leather	...	...	...	...	...	...	...	...	"		2	15	0
7E.	LYNCH'S COMPLETE HOUSEHOLD SYRINGE, consisting of Higginson's Enema with disconnecting mounts, fitted with bone bulb-pointed rectum pipe for adults, elastic-gum rectum pipe with bone shield for children, elastic-gum vagina pipe, and bone pipes for ear, eyes, and nose, in mahogany box	...	...	...	...	...	...	...	...	each		0	7	6

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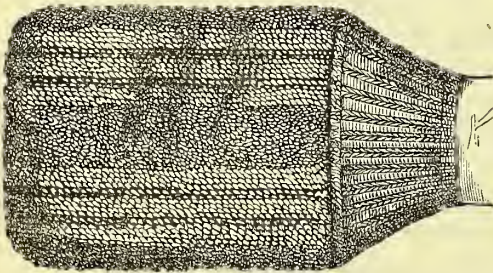
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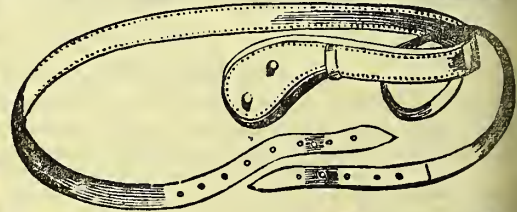
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ROLL BANDAGES.

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The superior quality of NEWSOME'S ABSORBENT SURGEONS' LINT is universally admitted.

The V.B. Quality is quite pure and of great superficial area and exquisite softness.

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Newsome's Bleached Rolled Bandages, 3 in., 2½ in., 2 in. Also Surgical Absorbent Open Bandages.

Specially Bleached Grey Carded Cotton Wools, Absorbent and Bleached and Grey Waddings; also  
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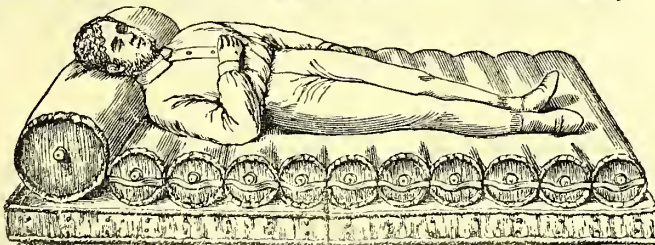
Prize Medals, Sanitary Congress, 1878; Industrial Exhibition, York, 1879; Certificate of Honour, Sanitary Congress, 1879; Brighton, 1881; International, 1881; Kensington, 1882.

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consists of a series of  
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slightly apart.



ITS ADVANTAGES:

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1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
3. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bed-pan.

8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.

9. It is free from noise and surging, so disagreeable to the invalid on changing his position on a water-bed.

10. In case of injury to a tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed if injured in any part (from being in one compartment) is rendered useless.

11. In the treatment of insane or paralysed invalids who have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.



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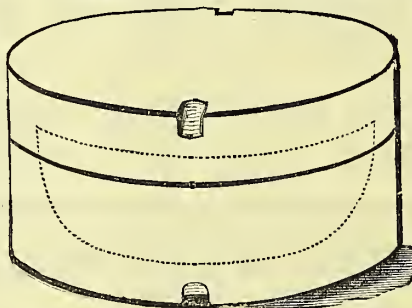
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# EARTHENWARE COVERED POTS

ARE CLAIMED TO BE THE MOST PERFECT AND CONVENIENT YET OFFERED TO THE TRADE, AND POSSESS THE FOLLOWING ADVANTAGES:—

1st.—An India-rubber Band passed vertically over the pot is kept in its place by the notches, and effectually secures the lid; for travelling this supplies a want greatly needed.

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3rd.—The inside of the Pot being rounded or egg-shaped the contents can be entirely removed without waste.

4th.—Great attention has been paid to insure accuracy of contents.

PRICES. {  $\frac{1}{8}$  18/-  $\frac{1}{4}$  18/-  $\frac{1}{2}$  18/-  $\frac{3}{4}$  20/- 1 22/-  $1\frac{1}{4}$  24/- 2 27/- 3 34/- 4 42/- 6 54/- 8 oz. 66/- per Gross.



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THE 1s. WHITE GLASS—

WHITE FITTINGS, 7/6; BLACK FITTINGS, 8/6 DOZ.

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## DR. BELL'S EUCALYPTUS ANTI-CATARRH

OR,

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RETAIL, 1/1½; WHOLESALE, 9/- DOZEN.

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WILLIAM TOOGOOD'S REVISED PRICE CURRENT of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.



ADDRESSED TO CHEMISTS AND DRUGGISTS. AGENTS WANTED.

**DR. HENRY A. MARTIN'S  
PURE RUBBER BANDAGES (GENUINE),***For the Radical Cure of Varicose Veins, Weakness, Ulcers, Eczema, and other Diseases of the Leg, and for Injuries of the Knee and Ankle Joints.*

far superior to any of the numerous imitations; are now being sold at less cost than those of other manufacturers

**TESTIMONIAL:**

To MESSRS. KROHNE &amp; SESEMANN.

GENTLEMEN,—I have the greatest pleasure in acceding to your request, that I should, from my experience of the Martin's Bandages, testify respecting their excellence.

My knowledge of the quality of Bandages of English make is limited: for having, about fifteen months back, applied bandages sent to me from this source, and noting the evident irritation and discomfort produced by them—so great, indeed, that each patient soon discontinued their application—I used to recommend and use them.

In April of this year, I for the first time used the original Martin's Bandage, and since then I have applied them and none else to the limbs of nearly twenty persons suffering from a variety of complaints, such as ulcers of the leg of old standing, which had resisted all treatment for more than fifteen years; varicosities (the unsound leg of one patient, a man, measured 25 inches round the calf, against 16½ inches, the size of the sound leg; and his condition was such that, before coming under my care, it had been by his former attendant seriously debated whether or not the leg should be amputated to save life. This man goes about wearing a 21-foot Bandage, and the calf of the unsound leg now measures 18 inches); erysipelas, oedema, rachitis, &amp;c.

Suffice it that all, both young and old, have been enabled to wear them with comfort; most of the cases under treatment have been cured, all healed, and many, although well, continue to wear them on account of their safety and the support they give rise to.

I may appear to have said too much in their favour. I can assure you that my feeling is that I have said too little. The great success attending their use evidently arises from the excellent purity, smoothness, impermeability, and non-irritating nature of the India-rubber of which each Bandage is composed.

I am, &c., EDWARD C. ANDERSON, M.D., M.A., Cantab.  
**CAUTION TO THE TRADE.**—The Sole Agents for the Genuine Martin's Bandages request the Trade to compare their Prices with those commonly charged for worthless imitations, which are advertised as "Recommended by Dr. Martin," or as "Suggested by Dr. Martin," which is misleading, the vendors having not the shadow of a title to use Dr. Martin's name in connection with their bandages. Each GENUINE BANDAGE stamped with Dr. H. A. Martin's signature is warranted to be perfect in every respect, and to wear well.**For the Leg, from the Foot to below Knee.**—No. 1, thick, 7/3; No. 1A, medium, 6/; No. 1B, thin, 4/3.**For the Leg from the Foot to Groin.**—No. 2, thick, 16/6; No. 2A, medium, 13/; No. 2B, thin, 10/.**For the Knee-joint and Thigh.**—No. 5, extra thick, 5/; No. 6, extra thick, 7/9; No. 7, medium, 7/6.**For the Ankle, Wrist, and Forearm.**—No. 3, thick, 3/6; No. 3A, thin, 2/9.**PRICES SUBJECT TO 20 PER CENT. DISCOUNT.**

Special Terms for Export to Shippers and Colonial Agents.

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**KROHNE & SESEMANN, SURGICAL INSTRUMENT MAKERS,****8 & 38, DUKE STREET, MANCHESTER SQUARE, LONDON.**

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Manufacturers (to the Wholesale Trade) of

**ELASTIC GUM SURGICAL INSTRUMENTS.****WORKS: LAMBETH.****E. BENTLEY & SONS,**

MANUFACTURERS OF

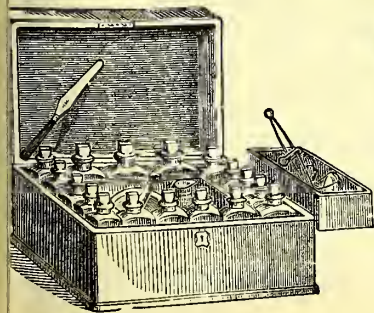
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AND

**MEDICINE CHESTS.**

Also Inventors of the New Opal Glass Pots for Dispensing, &amp;c.

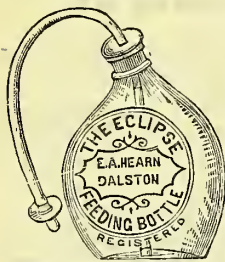
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**Feeding Bottles.****THE "ECLIPSE."**

Fitted with Boxwood or China topped Corks.



White Fittings, 30s. per best Black Fittings, 6s. per gross.

Fitted with best Screw Glass Stoppers, 6s. per gross extra.

The above are put up in one dozen wood-partitioned boxes.

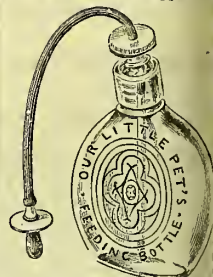
Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

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GLASS BOTTLE****MANUFACTURERS,****381 KINGSLAND ROAD, LONDON, E.**

GLASS BOTTLES of EVERY DESCRIPTION, either PLAIN or STOPPERED, made in WHITE, BLUE, AMBER, ACTINIC GREEN, or any other colour required.

**SCREW NICKEL CAPPED POMADES, HONEY POTS,  
JELLY JARS, &c., &c.****SPECIAL ATTENTION GIVEN TO QUALITY.***Quotations Post Free to any part of the world on Application.***The above will be found the BEST and CHEAPEST  
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Fitted with best Porcelain Caps or Screw Glass Stoppers.



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POROUS PLASTERS.****24s. per gross.****SUBJECT.***Samples on Application.***EDWARD TAYLOR,****MANUFACTURER OF ALL KINDS OF****MEDICAL, SURGICAL & MARGINAL PLASTERS**

For Home Trade and Export to all climates.

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WITH METALLIC NICKELLED CAPSULES.**

The above new method (first introduced by G. V. De Luca) excels all others for neatness and elegance, and is specially adapted for export. Made in various new designs. Spécialité for Bottles for all kinds of Confectionery, Essences, Mazes, and Sundries. N.B.—Beware of imitations sold at cheap prices, the capsules being a mixture of lead or tinned iron.

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**SHOP BOTTLES & JARS  
WITH VITRIFIED (burnt in) LABELS***(Black letters on a ground of pink or white enamel).*

Narrow-mouthed and Wide-mouthed Bottles, well stoppered; Capped and Tube-stoppered Oil Bottles; Syrup Bottles, with Plug Stoppers of Dark Blue or White Opaque Glass; Lozenge Jars with Cut Glass Knobs; Cut Perfume Bottles, Round, Oval, and Square; Shop Jars of Best Porcelain, thoroughly Greaseproof. Labels Indestructible and of elegant Appearance, forming an even surface with the Glass or Porcelain. PRICE LIST ON APPLICATION. A Large Variety of Samples on Show at

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FITTED WITH SCREW GLASS STOPPERS.

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Small quantities are conveniently sent by PARCEL POST.

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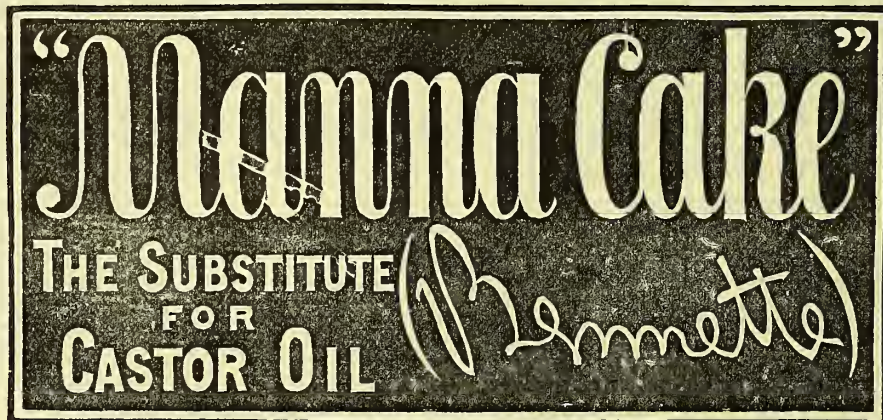
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12/-  
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The mildest and most agreeable aperient known. A first-class Family Medicine for every household. Highly approved of by adults; children take it readily and do not suspect its properties. A most suitable aperient for women at all times, and during the whole course of pregnancy. Does not gripe, and leaves no bad effect as Castor Oil does. A digestive tablet and sweet to the taste.

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**LONDON WAREHOUSE—11 LONG LANE, E.C.***MANNA CAKE is sent out in Handsome Decorated Tin Boxes, suitable for display on the Counter.*  
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SYDNEY, 1879.



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**MINERAL WATER**

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One of the best selling  
Various Styles  
Green and White Glass, with

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We supply GLASS BOTTLES for  
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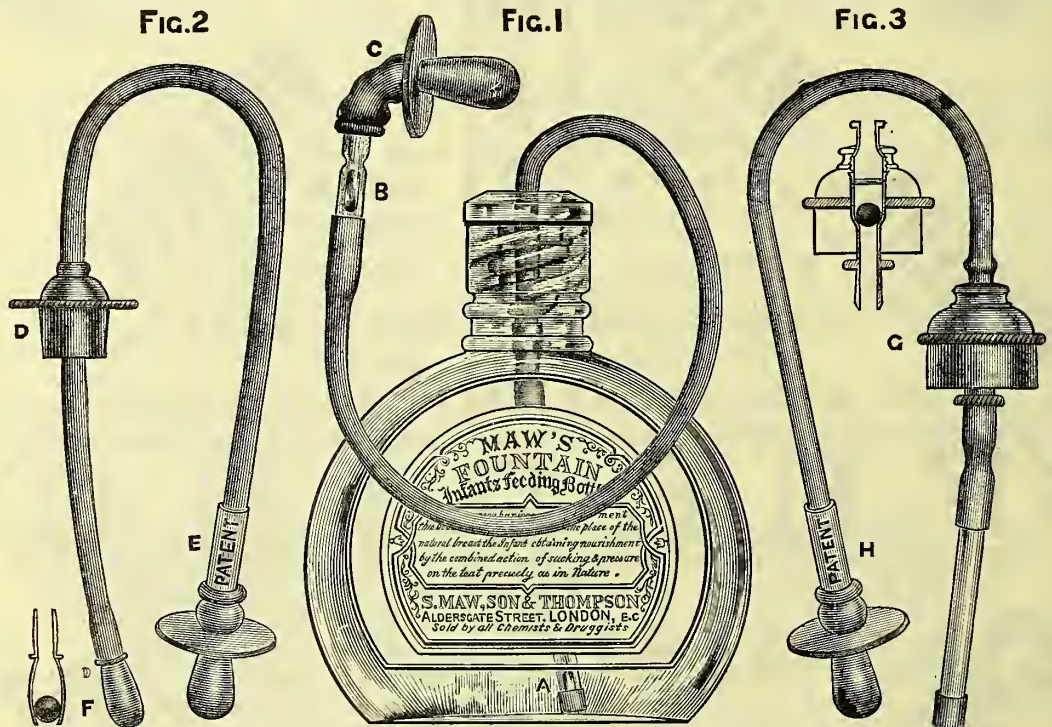
**KILNER BROTHERS,**

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# MAW'S PATENT FOUNTAIN FEEDING BOTTLES FOR INFANTS.

Retail, 1s. 6d. & 2s. 6d. each. Wholesale, 12s. 6d. & 20s. per dozen.



Unless ordered to the contrary, MAW'S FOUNTAIN FEEDING BOTTLES are now always supplied as Fig. 1, with Glass Screw Stoppers, and fitted with Glass-Valve Tube (A), Registered Glass-Valve Union (B), and Registered Curved Indiarubber Teat (C).

*These Bottles are PERFECT IN ACTION, and are STRONGLY RECOMMENDED.*

MAW'S FOUNTAIN FEEDING BOTTLES can be had with the OLD FITTINGS as formerly, if so ordered, at the same prices as Fig. 1.

Fig. 2 represents the (1/6) old fittings—Metal Plug-Stopper (D), Patent Coupling-Piece (E), and Metal Ball-Valve (F).

Fig. 3 represents the (2/6) old fittings—Metal Cap with Ball-Valve inside (G), and Patent Coupling Piece (H).

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Chemists by Appointment to the London Homœopathic Hospital,  
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## HOMŒOPATHIC MEDICINES

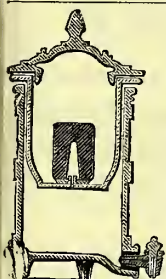
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PRICE LISTS OF MEDICINES, MEDICINE CHESTS, &c., POST FREE TO ANY PART OF THE WORLD.

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MANGANOUS CARBON possesses very high  
FILTERING POWER.

Can be readily taken to pieces for cleansing.

NO water can remain in reservoir to become  
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An entire absence of corrodible material.



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The Lower Bed is kept perfectly clean, thus  
adding to the durability of the Filter.

A DOUBLE ACTION secured to the power of  
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Any description of Filter Refilled at moderate  
charge.

Prize Medal, International Health  
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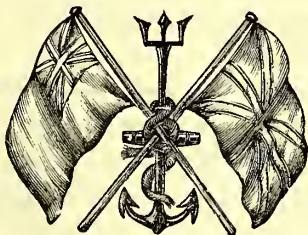
DOULTON & CO. also manufacture Boudoir or Table Filters, Pocket and Syphon Filters for Tourists' use, Manganous Carbon Self-acting Cistern Filters, Refrigerator Filters, Main Service Filters for Manufacturing purposes, Hotels, &c. May be had of all Dealers.—DOULTON & CO., Lambeth, London, S.E.  
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As original makers in this country of Cocaine salts, we beg our friends to note that we are prepared to meet any legitimate competition, and to supply a product of the highest purity and activity as heretofore. We have still further reduced our price, and invite enquiries for quotations.

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TOTTENHAM, LONDON.

PREPARED BEFORE AUGUST, 1875.



## KING'S HOP BITTERS

Are the old-established British Preparation and are "GENUINE HOP BITTERS," made only in Great Britain. Registered and Protected under the Trade Marks Act. They are an excellent aromatic tonic, very palatable, and command a large sale. Put up in bottles to retail at 1/1 and 2/3, also in packets containing ingredients for making Hop Bitters, 7/4d. and 1/1. N.B.—Each Bottle and Packet bears the above Trade Marks. Beware of Infringements.

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Special Agents appointed in all parts. Cards, Transparencies and Testimonials supplied. For further particulars apply as above.

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FOR STOPPING ALL BLEEDINGS.

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In 3, 5, 10, & 20 oz. Bottles, at 1/ per oz.,

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*Manufacturer, by Special Process, of every description of Superior Medicated Lozenges, Medicated Jujubes, Candies, and Boiled Sugars; also Granular Citrate of Magnesia, and all Granular Preparations.*

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Unlike most articles of this class *now in the market*, the Pearls are made by steam-driven machinery of great power; they are extremely hard, and hence, dissolving more slowly in the mouth than other kinds, the local action is longer maintained and the beneficial effect much enhanced. 6d. boxes, 3s. per doz.; bulk, 3s. 6d. per lb.

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### **COUGH DROPS.**

Superior quality, 8d. per lb. Special cash quotations for large buyers.

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*An endless variety of Highly-finished Medicated Lozenges and Jujubes of every description. Price Lists free on application.*

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The attention of the Trade is solicited to the above well-known preparations. Having unusual facilities for their manufacture upon a large scale, I can offer great advantages both in quality and price.

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**EXT. CINCHONÆ LIQUIDUM, DE VRIJ.**

*Prepared IN VACUO from selected Cinchona Bark.*

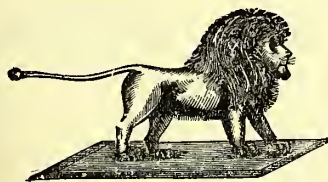
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Dr. De Vrij's Fluid Extract of Cinchona is the first preparation of its kind based upon the rational principle of alkaloidal standard. It forms perfectly clear solutions when diluted.

**Ext. Cinchonæ Liq., De Vrij**, is identical with the Fluid Extract proposed by Professor Edwood (see *Pharm. Journ.* Dec. 6, 1884), which will probably replace the present official preparation in the forthcoming Pharmacopœia.

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OVER ALL THE  
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Photographs of Cases Cured, neatly framed for exhibition, Transparencies, Bills with Name, &c., forwarded direct or through any Wholesale House. Plenty of Advertising Matter supplied to Chemists willing to push the sale.

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PRICES, 1s. 1½d., 2s. 9d., and 4s. 6d.



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BURROUGH'S  
Best  
Methylated  
Spirits  
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AT LOWEST PRICES.

BURROUGH'S  
SPIRITUS RECTIFICATUS P.B.

SPIRITS  
OF WINE

5 GNS. 19 1/4 CASH.  
THE BEST ENGLISH GRAIN SPIRIT  
FREE FROM FUSEL OIL CHEMICALLY PURE  
Special Quotation for Quantity.

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SAMPLES AND PRICES UPON APPLICATION.

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Guaranteed pure, thoroughly rectified, and  
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60 o.p., 20s. 9d. per Gal.

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### TINCTURE SPIRIT.

Useful for all purposes where absolute  
purity is not necessary.

60 o.p., 20s. 6d. per Gal.

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1s. per gallon discount for Cash with order.  
Further allowance for quantity.

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### BEST SPIRIT BLACK IN THE MARKET.

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COLORS.  
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### PURE SPIRITS of WINE

For Tinctures, Essences, Perfumes, &c.

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Beg to call the attention of CHEMISTS AND DRUGGISTS to their under-  
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Strength per cent.	Specific gravity.	Price per gall.
63 over proof ..	0.8238 ..	20/10
60     "     " ..	0.8298 ..	20/4
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Cash on Delivery.

Jars to be returned or paid for.

For Exportation, Cask included, 4/ 60 o.p., F.O.B.

Orders from the country must be accompanied by a remittance, including  
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Also ABSOLUTE ALCOHOL. Prices on application.



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Are Manufacturers, by Davis' Patented Process, of

## PURE BENZENE

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## COMMERCIAL BENZOLS,

## SOLVENT and VARNISH NAPHTHAS.

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extra refined quality, made with great care in the laboratory in glass vessels, for internal medical administration.

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A pure crystallized acid, especially prepared for external medical application.

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A brown acid, free from tar oils and sulphuretted hydrogen, for outdoor disinfection, drains, middens, cesspools, farm premises, &c., &c.

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Chemists can have space on Handbills for own speciality, under their Name and Address.  
Wholesale of **BARCLAY, SANGER, EDWARDS, HOVENDEN, &c.**  
Manufacture: **BIGGLESWADE, BEDS.**

HAMBRO SPECKLED.



TRADE MARK  
REGISTERED.

All Orders by Post receive immediate attention.

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Warranted Healthy, Wholesale and for Exportation, Direct from Marshes.

**FITCH & NOTTINGHAM,**  
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**MARSHALLS, & 55 PENTONVILLE**  
ROAD, LONDON, N.

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## Liquor Opii Sedativus,

By "BATTLE'S PROCESS,"

Warranted precisely as made in the laboratory, and under the superintendence of the late Richard Battley.

Can be procured from the principal Patent Medicine Dealers and Wholesale Druggists, or at

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Is the only thing which will effect a **Safe, Speedy, Certain Cure.** Simply Fumigate One, Two, or Three Minutes, according to age and health of animal, and Cure will be complete. See Hundreds of Testimonials of the highest class. Sold in Bottles, each sufficient for One Calf, 1s. 6d. each; or packed in boxes of 6, 6s.; or 10, 10s. each; with Garbett's Patent Cattle Fume Box (as below).

**RICHARD GARBETT, WALSALL.**

## SIMPSON'S PATENT FUMIGATOR

## GARBETT'S

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MARK]

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## FUME BOX.

A NEAT, SIMPLE, and PERFECTLY SAFE APPARATUS for Applying Fumigations of all kinds. Price 5s. 6d. each; or fitted for Veterinary Surgeons' Use, 10s. 6d. each.

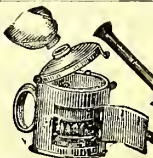
**RICHARD GARBETT, Patentee, WALSALL.**

## THE PATENT

## POT-BOX

Fitted with Heat  
Regulator, for

A Bronchitis Kettle, Inhaler, Emigrator, Saucepan, Food Warmer or Steam Bath Vapourer.



## UNIVERSAL HAND STOVE,

Instant Use either  
as

Will Boil Water in Open Air in any Weather in a Few Minutes. *Simple, Safe, Powerful, Reliable Everywhere.* Is invaluable to Invalids, Sportsmen, Volunteers, Clerks, Tourists, Travellers, Colonists, Bachelors, Students, Nurses, Night Workers, Housewives, and Professional Men alike, either at Home or Abroad, in Peace or War, Heat or Cold, Day or Night. Price 7s. 6d., 10s. 6d., or Nickel Silver Plated, 18s. and 21s. each, (or fitted for use of Veterinary Surgeons and Farmers, 10s. 6d. each).  
May be had of all principal Chemists and Dealers throughout the World, or of the Patentee, **RICHARD GARBETT, Walsall.** Supplied for use of Troops in Egypt



**"LA BRILLANTINE"**

(REGISTERED).

SOLD IN 6d. AND 1s. BOXES.

**METALLIC POWDER**

Is the best, cheapest, and most effective Powder for cleaning and polishing Metals and Glass (especially Brass). It is used by the Life, Horse, and Dragon Guards, the Fire Brigades, &amp;c., &amp;c.

PROPRIETORS—

**J. F. BAUMGARTNER & CO.,**  
22½ NEWMAN STREET, OXFORD STREET,  
LONDON, W.**GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.****JOHN OAKEY & SONS,**

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &amp;c.

**OAKEY'S WELLINGTON KNIFE POLISH,**

Prepared expressly for Oakey's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Packets, 8d. each; and Tins, with perforated Tops to prevent waste, 6d., 1s., 2s. 6d., and 4s. each.

**OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,**

For Cleaning and Polishing Silver, Plate Glass, Marble, &amp;c. Tablets, 6d. each.

**OAKEY'S POLISHING PASTE,**

For Cleaning Brass, Copper, Tin, Pewter, &amp;c., &amp;c. Tins, 1d., 2d.; Pots, 6d. and 1s. each.

**WELLINGTON BLOCK BLACK LEAD,**

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

**WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.**

Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1883. Gold Medal, Crystal Palace, 1884.

Starching made easy and pleasant.

Prevents the iron sticking to the linen.



Suitable for hot or cold water starch.

Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes, for Hotels, Laundries, &amp;c., 5s., 10s., and 20s. each.

Wholesale by Maw &amp; Sons, Evans, Sons &amp; Co., Southall Bros. &amp; Barclay, Wyleys &amp; Co., &amp;c.

**THE CELEBRATED DANGERFIELD'S IGNITING MATCH CASE.**

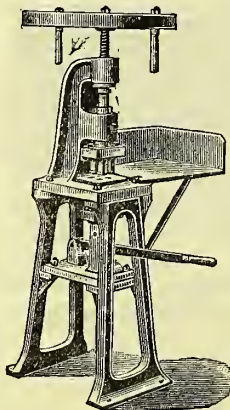
PRONOUNCED PERFECTION.

It has no equal in Mechanical Construction, Workmanship, Quality of Material, Neatness, Compactness, Convenience, and Low Price. Secured by United States and Foreign Patents. Prices the world over:—XX Tin, 1/ each, 7/6 per doz.; Solid Nickel Silver, 2/ each, 11/6 per doz.; Solid Nickel Silver, with Clipper, 2/ each, 14/6 per doz. Sent post free to any part of the world on receipt of price (P.O.O.).

FRANCIS S. DANGERFIELD,

Proprietor and Sole Manufacturer, AUBURN, N.Y., U.S.A.

C. BRANDON &amp; CO., 16 Red Lion Square, London, Sole Agents for Great Britain and Ireland.

**HAND & STEAM POWER PRESSES**

For making into Blocks, Tablets, or Pellets, Drugs, Blue, Blacklead, and other Powders.

**R. M. COLLINGHAM,**

ENGINEER,

Green Lane Foundry, Hull.

**FOR CLEANING PLATE.****BRADLEY & BOURDAS'S ALBATUM or WHITE ROUGE,**  
For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

**PITCH,**  
OILS, TALLOW, &c.**J. R. PEACE & CO.,**

26 ALEXANDRA BUILDINGS,

Establd.] 41 Ormond Street, Liverpool, [1867.

IMPORTERS OF AND MERCHANTS IN ALL KINDS OF PITCH, OILS, &amp;c.

Hard and Soft Stearine Pitch	Palm Oil Pitch	Brimstone, Ashes, &c.
Cotton Seed and Patent "	Hot Neck Grease	Roll and Flour Sulphur
Brown, Vegetable, & Wood "	Turpentine & Rosin	Tallow, Cylinder Oils, &
Stockholm and Archangel "	Soft Soap, Glues, &c.	General Produce.

SAMPLES AND LOWEST PRICES ON APPLICATION.

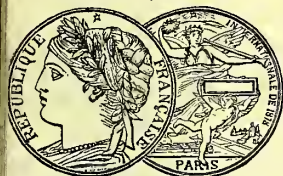


# IMPROVED AND LATEST MACHINERY

PARIS, 1878.

FOR

VIENNA, 1873.



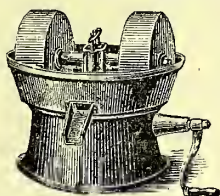
**DRUG GRINDERS,**  
WHOLESALE  
**CHEMISTS & DRUGGISTS,**



**PAINT AND COLOUR MANUFACTURERS,**  
**AND OTHERS.**

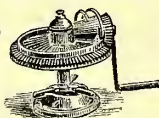
## HAND EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.



## HAND MIXING AND CRUSHING PAN MILL.

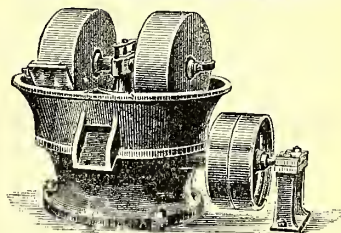
For Ointments,  
Pastes,



Powders,  
&c., &c.

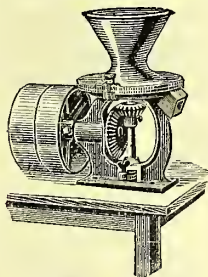
## POWER EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.



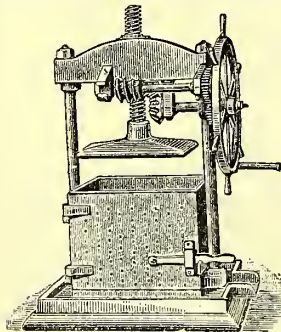
## NEW DRUG MILL.

For Ginger, Roots, and all kinds of friable materials.



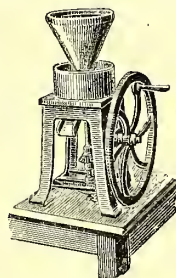
## COMPOUND PRESS.

For Tinctures, &c. (made in Wood and Iron).



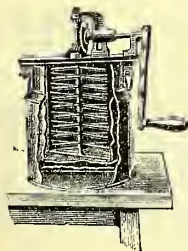
## HORIZONTAL MILL

For Dry Powders.



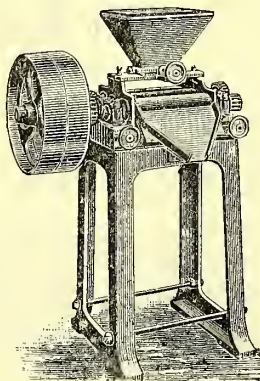
## NEW HORIZONTAL MIXER,

For Amalgamating Compounds, &c. (made with or without casing).



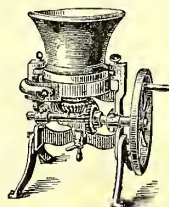
## NEW GRINDING MILL

For Pastes, Colours, and Inks.



## IMPROVED PAINT MILL.

For Mixing and Grinding Colours in Water or Oil ready for use.



MACHINES FOR SPECIAL PURPOSES, EVAPORATING PANS, &c., MADE TO ORDER.

Prices and particulars on application to

**FOLLOWS & BATE, LIMITED, Engineers,**  
**DUTTON STREET WORKS, MANCHESTER.**



**W. KEMP & SON, HORNCASTLE.****PURE CRUSHED LINSEED,**

CONTAINING ALL THE OIL. A strictly pure article, all other seeds, dirt, &c., being entirely removed. It is lightly crushed from a special kind of large bold seed, which gives a larger proportion of meal to husk than the ordinary commercial Linseeds. Price 18/6 per cwt., bag free. Special quotations for 5 cwt. and upwards.

*NOTE*.—This quality can be obtained from Messrs. Barclay & Sons, 95 Farringdon St., London, in 1-cwt. bags at above price; smaller lots 20/ cwt.

**CRUSHED LINSEED No. 2,**

Contains all the Oil, and is crushed from sound good Linseed, 17/6 per cwt., bags free.

**CRUSHED LINSEED No. 3,**

Contains all the Oil, and is crushed from sound good Linseed, 16/6 per cwt., bags free.

**CRUSHED SICILIAN LINSEED,**

The best for feeding purposes; merely require scalding to make a stiff jelly, and when introduced at once creates a large demand; bags free.

**PURE LINSEED MEAL,**

WITHOUT OIL. Best quality only, 11/6 cwt., bags free.

All ground in our own mills, and always sent out freshly crushed.

Special Quotations for Quantity.

Above can be had with the Husk wholly or partially sifted out at an advanced price. Correspondence on this subject is invited.

*Applications for Samples solicited.*

**W. KEMP & SON, Seed Crushers, HORNCASTLE.**

CRETA PREP.  
BOLE, ARMENIA  
FERRI, RUBIGO  
" SUB. CARB.  
CHARCOAL PRECIP.  
PUMICE  
JEWELLERS' ROUGE  
&c., &c.

**COLOURS****STATON & COOPER,**

ESTAB. 1796. Challinor's Colour Works, City Road, DERBY, [ESTAB. 1796.]

**WHOLESALE DRUG LEVIGATORS**

Manufacturers of Paints, Colours, and Varnishes.

SAMPLES & QUOTATIONS ON APPLICATION.

COLCOTHAR  
LAPIS, CALIM.  
PLATE POWDER  
FULLER'S EARTH  
ROTTEN STONE  
CROCUS  
CORNU CERVI  
&c., &c.

**PAINTS****ROSE, DOWNS & THOMPSON,  
HULL,**

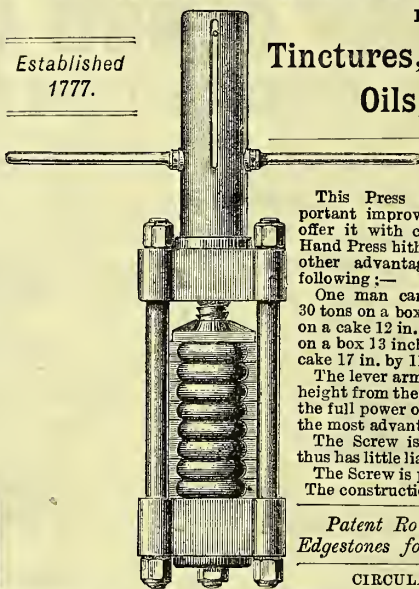
**OIL MILLS OF ALL KINDS,**

Sole Makers of **THOMPSON'S**

**PATENT SCREW PRESS**

FOR

Tinctures, Essences,  
Oils, etc.



This Press embodies many important improvements, and we can offer it with confidence as the best Hand Press hitherto made. Amongst other advantages it possesses the following:—

One man can exert a pressure of 30 tons on a box 9 inches diameter, or on a cake 12 in. by 8 in., or two men on a box 13 inches diameter, or on a cake 17 in. by 11 in.

The lever arm is always the same height from the ground, thus enabling the full power of a man to be used at the most advantageous level.

The Screw is of coarse pitch, and thus has little liability to strip or wear.

The Screw is protected from injury. The construction is very simple.

*Patent Rolls for Linseed,  
Edgestones for Drug Grinding.*

CIRCULARS GRATIS.

**AXLE GREASE**

IN 1½ LBS. WOODEN BOXES.

Send for Sample Box and Price, free on application.

**JOHN ROGERS, 79 VICTORIA STREET, BELFAST.**

The Leading Article for Waterproofing, Softening, and Preserving BOOTS, LEGGINGS, HARNESS, MACHINE BELTING, FIRE HOSE, &c.

THREE  
GOLD

MEDALS.

**DALES' GOLD MEDAL PORPOISE OIL DUBBIN**

Does not prevent the boots blacking. Free from unpleasant odour. Makes leather goods wear three times longer than ordinarily. Sells well and pleases the buyer. Put up in superior style in tins, 2d., 6d., 1s., and 2s. 6d. (no retail price on tins and special tins for export). Show Cards, Transparencies, &c., supplied; also Handsome Show Cases for first orders for 50s. For further particulars see page 64 in 1885 Diary.

**JOHN T. DALE, 287 Crystal Palace Road, LONDON. S.E.**

Avoid Imitations under Various Names—Use only the Standard and Original Article.

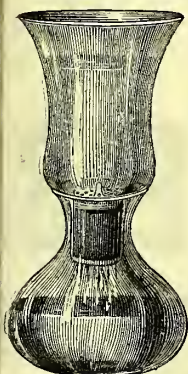
**HAUTHAWAY'S PEERLESS GLOSS,**

A NECESSITY in every Family. It BLACKS and POLISHES Ladies' and Children's Boots without Brushing, being supplied with a Sponge attached to the Cork for instant use.

**JOHN S. DEED & SONS, NEW OXFORD STREET, LONDON,**  
SOLE WHOLESALE AGENTS FOR THE UNITED KINGDOM.



# MAWSON & SWAN'S PATENT. NEW FILTERS, PATENT.



IMPROVED AND PERFECTED SINCE 1884.

The most Effective, Convenient, and Elegant ever invented.  
Removes Animal, Vegetable, and Mineral Contaminations.

The Filtering Medium is composed of pure animal charcoal of various grades of fineness, supported on and covered by glass wool, the whole held in position by a perforated plate mechanically secured. It can be easily removed and the charge renewed at home, sufficient charcoal being given with each filter for about six charges.

No Tubes or Corks to allow water to leak through unfiltered.  
No Blocks to become choked or channelled.

RETAIL PRICES—Plain 4/6, with handle 5/6; engraved 6/6, with handle 7/6.

Earthenware filters on the same principle, retail prices—1 gall., 14/6; 2 gall., 21/; 3 gall., 27/; 4 gall., 35/.

PROPRIETORS—

**MAWSON & SWAN, 20 WEST GRAINGER ST., NEWCASTLE-ON-TYNE.**

WHOLESALE AGENTS.—LONDON: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. William Toogood; Messrs. Lynch & Co. MANCHESTER: Messrs. Woolley, Sons & Co. LIVERPOOL: Messrs. J. H. & S. Johnson; Messrs. Symes & Co. EDINBURGH: Messrs. Duncan, Flockhart & Co. GLASGOW: Glasgow Apothecaries' Co.

## ICING AND KALI SUGAR.

SAMPLES ON APPLICATION TO

**W. HOSKIN,**

SUGAR MILLS, NEW STREET, HUDDERSFIELD.

## INTERNATIONAL HEALTH EXHIBITION.

MAIGNEN'S PATENT

## "FILTRE RAPIDE."

GOLD MEDAL

FOR

WATER "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

Wine, Spirit, Beer, and Syrup

"FILTRE RAPIDE."

GOLD MEDAL

FOR

ARMY "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

WATER-SOFTENING Process for Boilers

(Saving Life in Workshop).

BRONZE MEDAL (HIGHEST AWARD) FOR

MAIGNEN'S Patent "ANTI-CALCAIRE" Powder

To SOFTEN WATER for WASHING.

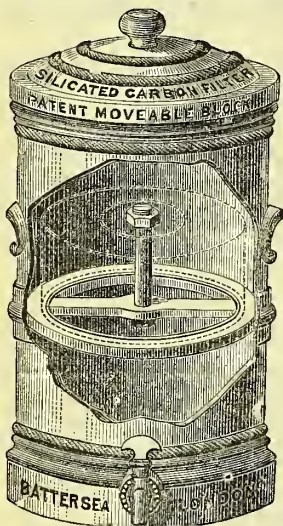
Full particulars in Pamphlet, "Water, Preventable Disease, and Filtration," by P. A. MAIGNEN, 32 St. Mary-at-Hill, Eastcheap, London.



# SILICATED CARBON

## PATENT MOVEABLE-BLOCK FILTERS.

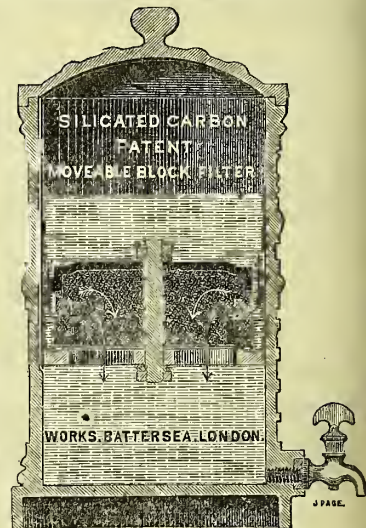
These Filters are constructed on Scientific principles, and can be renewed or repaired by the user without returning to the maker. They possess all the advantages of those with fixed filtering mediums, while the simple removal of the Silicated Carbon Block leaves the *whole* of the interior of the Filter open for inspection and cleansing. The working parts are stoneware, and corrosion is impossible.



(Elevation with Block removed.)

NO LOOSE PAN OR INNER VESSEL  
TO CAUSE BREAKAGE.

The block being non-porous on the top and edges, an *upward* direction is given to the water, which thus passes through a greater thickness of the Silicated Carbon, as shown by the arrows in drawing.



(Section.)

The Silicated Carbon Block can be instantly removed, leaving the whole of the interior of the Filter *open* for inspection and cleansing.

To Cleanse the block, plunge it into boiling water, and well scrub it with a hard brush.

Extra blocks can be supplied with each Filter. All parts being interchangeable can be replaced in case of accidents.

This Patent can be adapted to all patterns manufactured by the SILICATED CARBON FILTER CO. *without increased charge.* In ordering please state "*with patent moveable block.*"

Domestic Filters (as above), in Cream-coloured Stoneware, with Plated Taps and Patent Moveable Blocks:—

No. 27. O. $\frac{1}{2}$ gal. 10/6 each.	D. 6 gals. 42/- each.
A. 1 " 14/6 "	E. 8 " 52/- "
B. 2 " 21/- "	F. 12 " 70/- "
C. 4 " 32/- "	

Dining Room Filters, in Marbled China, with Plated Taps and Patent Moveable Blocks:—

No. 22. A. 2 gals. 35/- each.
B. 5 " 80/- "

Refrigerative Terra Cotta do., do.:—

No. 25. 2 gals. 31/6 each.
----------------------------

All makes of Filters can be refitted on this principle, 1 gal. 8/6, 2 gals. 10/-, 4 gals. 12/- each. Larger sizes in proportion.

# SILICATED CARBON FILTER COMPANY.

## WORKS: BATTERSEA, LONDON.



# SILICATED CARBON FILTERS.

## SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

- A.—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal-box .. .. 2 6
- B.—Ditto, 3½ inches diameter, in best stoneware .. .. 5 0
- C.—Emigrant's, 5 inches diameter, with silver-plated tap .. .. 12 0
- D.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and Zululand, and to the Ashantee and Egyptian Expeditions .. .. 3 6
- H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits .. .. 5 0

## FILTERS.

### TABLE FILTER,

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



### NO. 24.

to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

#### PRICES.

No. O, 2s. 6d.; A, 4s.; B, 5s. 6d.

Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.



### DINING-ROOM FILTER,

#### No. 22.

WITH PATENT MOVEABLE BLOCK.

MADE IN MARBLED CHINA.

#### PRICES.

- A .. Two Gallons .. .. 35s.
- B .. Five Gallons .. .. 60s.

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

### REFRIGERATOR FILTER, NO. 25,

WITH PATENT MOVEABLE BLOCK.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A COOL DRAUGHT OF PURE WATER.

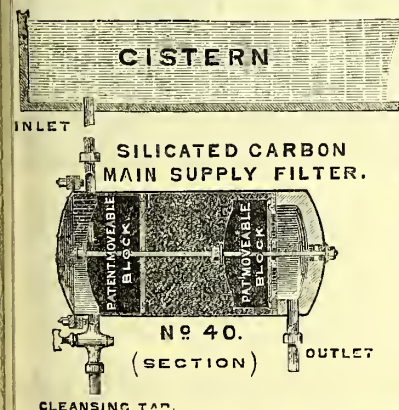
Price, with Silver-plated Tap .. .. 31s. 6d.  
Capacity Two Gallons.

Specially adapted for Tropical Climates.



### MAIN SUPPLY FILTER, NO. 40,

WITH PATENT MOVEABLE BLOCKS,



### FOR MINERAL WATER MANUFACTORIES,

As used by Messrs. Schweppe, London, Liverpool, Glasgow, &c.; and most of the large makers.

Also for Schools, Hospitals, Mansions, &c.

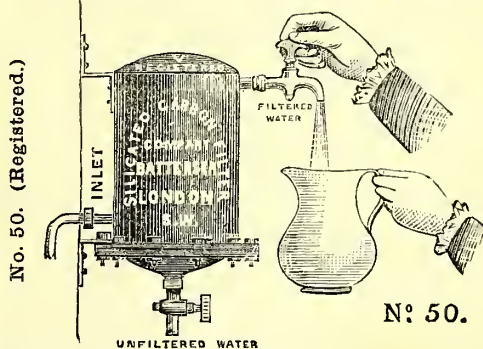
#### PRICES.

- For ¾-in. Pipes .. .. £8 6s.
- „ 1-in. Pipes .. .. £9 9s.

### CONSTANT SUPPLY FILTER,

WITH PATENT MOVEABLE BLOCK.

SILICATED CARBON [TRADE MARK]



No. 50. (Registered.)

No. 50.

Complete, Price £3 3s. each.

These Filters require no attention from servants, as they are always filled and ready for use. The act of drawing Unfiltered Water cleanses the Filter, by washing away the impurities collected on the carbon.

FOR FULL PARTICULARS WRITE TO THE

# SILICATED CARBON FILTER COMPANY,

CHURCH ROAD, BATTERSEA, LONDON, S.W.





# ADDRESS CARDS.



**SAM<sup>L</sup>. LAMBERT & CO.,**  
**DRUG, OIL, AND CHEMICAL BROKERS,**  
132 Fenchurch Street, London, E.C.

AGENTS FOR  
Fratelli de Pasquale & Co., Messina. Fridr. Jobst, Stuttgart.  
I. Bernhardt, Leipzig.

**SHARLAND & COMPANY,**  
**WHOLESALE DRUGGISTS,**  
**AUCKLAND, NEW ZEALAND.**

Samples may be sent for enclosure to Messrs. Horner & Sons, Mitre  
Square, Aldgate, London, E.  
London References—Messrs. HORNER & SONS.

**FRED<sup>K</sup>. FINK & CO.,**

10 & 11 MINCING LANE, LONDON, E.C.

**SPECIALITIES:** Glycerine—Gum Arabic—Gum  
Tragacanth—Pure Beeswax—Honey—Quinine.

**SHIRREFFS & CO.,**

Chemists, Druggists, and General Merchants,  
ALLAHABAD, N. W. P., INDIA,

Possess exceptional facilities for the introduction of New Specialities,  
Patent Medicines, Druggists' Sundries, Perfumeries, &c.

**AGENCIES UNDERTAKEN.**

**R. MORRISON & CO.**

2 FEN COURT, LONDON E.C.

**DRUGS, OILS, AND CHEMICALS.**

**SPECIALITIES**—Glycerine of all gravities, Sulphur, Brimstone, and Arsenic.  
Leghorn Oils, Olive and Castor, Acetic Acid, Essence of Lemon and  
Bergamotte. Chloral Hydrate and Croton Chloral Hydrate.



**BUTTER COLOURING & CHEESE RENNET.**

AGENTS AND CORRESPONDENTS:  
ALFRED CHOLLET, Saumur. ALRX. BRANDES, Hamburg.  
W. & N. BLANDOFF & Co., GILLES HOEN, Battice.  
Moscow. A. MICHELET, Christiania.  
CANEPA & RICHINI, Genoa. KUYPERS & Co., Rotterdam.  
LAFRENTZ & Co., London. DOBBIN, OGILVIE & Co., Cork.  
VICTOR FORCELJUS, Abo. WILL. ADAMSSON & Co., Mel-  
boure.  
**MEYER & HENCKEL,**  
Manufacturers, COPENHAGEN (Denmark).

**PETROLEUM  
JELLY,**

EQUAL TO AND CHEAPER THAN VASELINE.  
**SANITARY FLUID AND SHEEP DIP,**  
THE CHEAPEST AND BEST DISINFECTANT.  
GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.  
*Samples and Prices on application.*  
**GRINDLEY & CO., POPLAR, LONDON, E.**

**YARDLEY & CO.'S  
CHOICE TOILET SOAPS.**

*Prize Medals Awarded for Purity and Excellence of Quality.*

Manufactory—Ridgemoor Street, Store Street, Tottenham Court  
Road, LONDON.  
Depot—32 Rue de l'Entrepot, PARIS.

**E. BRAMWELL & SON,**

ST. HELENS, LANCASHIRE.

**EPSOM SALTS (PURE).**

**CREAM CAUSTIC SODA.**

**SULPHITE OF SODA,**

PHOTOGRAPHIC AND COMMERCIAL.

**ANTOINE'S INK.**

PARIS.

GREENWICH.

**SOLD BY ALL STATIONERS THROUGHOUT THE WORLD.**

**BARBER'S CONCENTRATED  
LIQUID COCHINEAL**

FOR COLOURING JELLIES, CUSTARDS, &c.

A few drops are sufficient to colour a large quantity of Jelly.

Put up for Retail Sale in 6d. and 1s. Bottles.

Manufactured only by the Proprietors—

**G. BARBER & Co.,** 8 Worcester Drive, LIVERPOOL.

Can be obtained through any of the usual Wholesale Firms, or from the  
Proprietors, G. BARBER & CO., Club Moor, Liverpool.

**GIOV. RESTUCCIA & CO.,**

Established 1860.] MESSINA (SICILY), [Established 1860.

**MANUFACTURERS OF ESSENTIAL OILS,**

By Hand Press and Machine, viz.:

**LEMON, BERGAMOT, ORANGE-SWEET and BITTER,** guaranteed  
pure and of very superior quality, expressly made for Perfumery, Confectionery,  
Liqueurs, and Mineral Waters.

Prize Medals at all the Chief Exhibitions of the world.

Sole Agent: **JOHN MULLETT, 45 Fenchurch Street, E.C.**

**INSECTICIDE GALZY.**

Infalible Destruction of Bugs, Fleas, Lice, Flies, Gnats,  
Cockroaches, Mites, Ants, Caterpillars, Weevils, &c.

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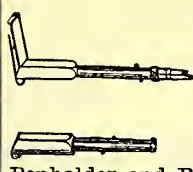
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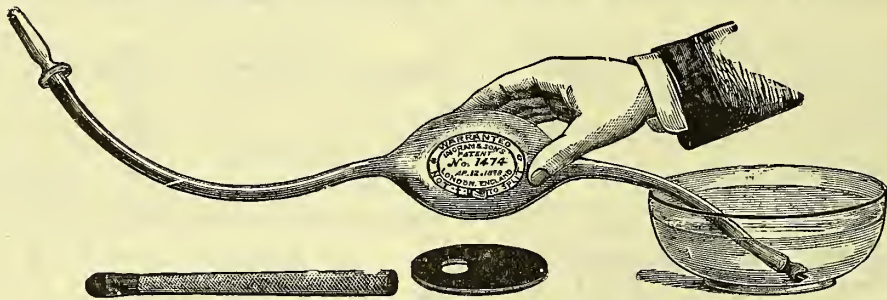
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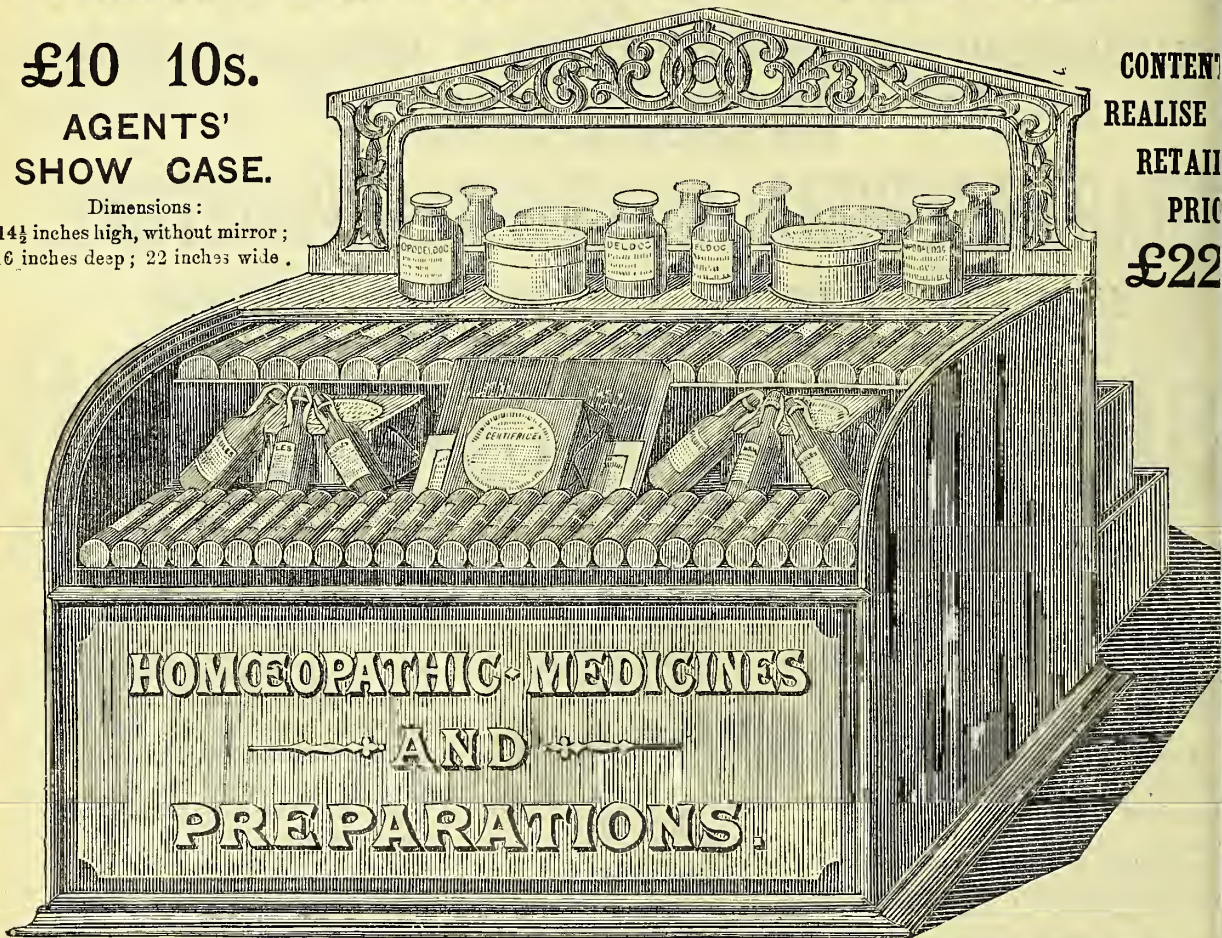
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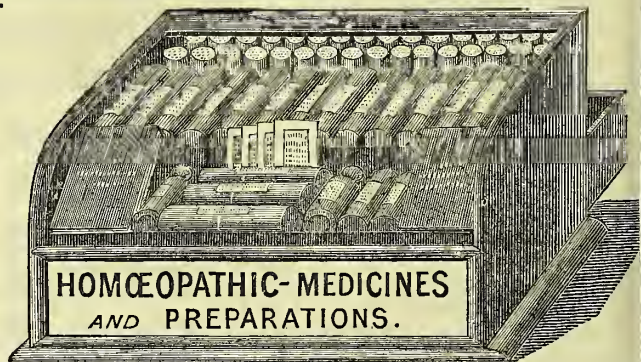
50/- AGENT'S SHOW CASE.

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Size of 50s. Case, 16 x 10½ x 8.

This is the cheapest and best Homœopathic Show Case in the trade, and the only one with bent glass for the money. A list of others on application.



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